

A CRITICAL ANALYSIS OF JOINT LOGISTICS PROFESSIONAL
MILITARY EDUCATION FOR ARMY LOGISTICIANS

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Joint Planning Studies

by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

A CRITICAL ANALYSIS OF JOINT LOGISTICS PROFESSIONAL MILITARY EDUCATION FOR ARMY LOGISTICIANS, by Major Jennifer M. Dembeck, 106 pages.

National strategy is calling for a future defense force that is responsive, agile, flexible, and increasingly interoperable. As the US military prepares to meet this need in a time of fiscal constraints, it will do so while the organizational structure adjusts to a smaller, leaner force. Joint services, increasingly dependent upon one another, must possess a shared understanding and the ability to integrate capabilities, personnel, and systems. The Logistics Force must meet this need while operating within the provisions of Title 10 and complex logistical authorities. Professional Military Education is the critical component to developing the foundations necessary for interoperability. This study investigates the current Joint Logistics Officer Professional Military Education program at the intermediate level to determine if it is suitable to meet DoDs current and future operational needs through a comparative analysis. Additionally, this study will provide a foundation for recommended improvements to joint logistics educational opportunities that facilitate well-sustained and globally integrated operations across the joint force in keeping with our National Strategic objectives.

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My hope is that the critical learning areas developed in this document assist the joint logistics force in preparing to meet the challenges of the Joint Force 2020. Further, that it has provided a foundation for the development of joint logistics professional education programs tied to our national strategy. Education is the critical link in growing experts within the field of logistics and I hope that this small study contributes to the continued development of joint logistics education.

Finally, this project would not have been possible without the support of my husband, Michael, and my family. Their constant encouragement was my source of strength and allowed me to persevere to the completion of this study. For that, I am eternally grateful.

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ACRONYMS

AOC	Advanced Operations Course
CASCOM	Combined Arms Support Command
CGSC	Command and General Staff College
CGSOC	Command and General Staff Officers Course
CJCS	Chairman of the Joint Chiefs of Staff
COCOM	Combatant Command
DoD	Department of Defense
ELO	Enabling Learning Objective
GNA	Goldwater-Nichols Defense Reorganization Act of 1986
JF2020	Joint Force 2020
JLE	Joint Logistics Environment
JLEnt	Joint Logistics Enterprise
JLPME	Joint Logistics Professional Military Education
JPME	Joint Professional Military Education
MECC	Military Education Coordination Council
OCS	Operational Contract Support
OPMEP	Officer Professional Military Education Policy
PME	Professional Military Education
SAE	Special Areas of Emphasis
SecDef	Secretary of Defense
TLO	Terminal Learning Objective
USC	United States Code

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CHAPTER 1

INTRODUCTION

The logistic capacity of the U.S. military is unmatched, and the Nation's ability to project military power provides the joint warfighter unprecedented capabilities. However, a constantly changing operating environment and budgetary constraints demand that we optimize joint logistics to enhance capabilities. We are at a point where we have the opportunity to advance efforts to design and implement systems, processes, and organizational changes that will improve the support of tomorrow's joint warfighter.¹

— Lieutenant General C.V. Christianson, *Joint Force Quarterly*

Today's global security environment is complex and uncertain. The ability of our nation's military to respond rapidly and effectively to a range of military operations is critical to achieving national strategic objectives. As the Department of Defense (DoD) prepares to meet the challenges of 21st Century warfare, our national strategy demands we conduct globally integrated operations. The ability of the joint force to conduct a broad range of military operations is directly enabled by efficient and effective logistics. As stated most recently by the Chairman of the Joint Chiefs of Staff (CJCS) in the Capstone Concept for Joint Operations, "The strength of our Joint Force has always been its ability to combine unique Service capabilities to project decisive military force."² Rationalization, standardization, and interoperability in the joint environment promote interdependence and provide a unique flexibility for combatant commanders in their employment of forces.

¹ Lieutenant General C. V. Christianson, "Joint Logistics in the Future," *Joint Force Quarterly* no. 41 (2nd Quarter 2006) (accessed May 15, 2014), www.ndupress.ndu.edu.

² Chairman of the Joint Chiefs of Staff, *Capstone Concept for Joint Operations: Joint Force 2020* (Washington, DC: Government Printing Office, 2012), 4.

Recent budgetary constraints³ offer an added degree of complexity to DoDs ability to conduct globally integrated operations and may pose significant challenges for our future force; however, the move toward joint interdependence may serve as a catalyst for innovative solutions and opportunities by leveraging the joint forces' expertise and capabilities.

[W]e are in an era of austerity where budget cuts and economic uncertainties will impose serious challenges on how we allocate resources. Our ability to define and inculcate our value proposition across the Joint enterprise will be critical in achieving the proper balance between competing operational and joint education requirements.⁴

To find the appropriate balance between the operational and institutional domain, there must be an assessment of where our force stands currently. The use of joint professional military education (JPME) is an essential enabler for commanders in effectively managing logistics capabilities in joint operations. "Ensuring the principles of mission command in play at the Service level can function together in joint operations requires a common understanding of its varying manifestations and how they might be harmonized."⁵ A shared understanding of service capabilities, limitations, and systems within the Joint Force and broader Joint Logistics Enterprise (JLEnt) should provide the foundational knowledge that is required in growing an interoperable force. Senior leaders of the future force must be grown now to meet this need. Common understanding across services is dependent upon the educational opportunities represented in the JPME

³ Department of Defense, "Defense Budget Priorities and Choices - Fiscal Year 2014," January 2013, accessed September 24, 2014, <http://www.defense.gov/pubs/>.

⁴ Chairman of the Joint Chiefs of Staff, *Capstone Concept for Joint Operations: Joint Force 2020*.

⁵ Ibid., 8.

framework. This study will examine current joint logistics professional military education (JLPME) within DoD at the intermediate level and analyze it for suitability in meeting our current and predicted future operational needs.

This study will examine current operational needs through assessment of the national strategic direction, proponent concepts and guidance for the logistics force, and assess the writings of experts in the field for implications they may have on educational requirements for a joint logistics force. The study will then review JPME development and offerings within the current program of instruction. I will determine what shortcomings (if any) there are within the current JPME program and how those shortcomings translate (if at all) into professional military education. Much of the existing literature on recent operations and experiences have highlighted the need for highly coordinated and synchronized inter service logistics. The foundation to this interoperable logistical infrastructure is JPME.

Primary Research Question

Is the current Joint Logistics Officer Professional Military Education program suitable for DoDs current and future operational needs?

Secondary Research Questions

This study will investigate subordinate questions that will provide a foundation for the determination.

1. What do our current and projected future national strategies, policies, and concepts require of the joint logistics community?

2. How is joint professional military education developed? What is the process by which DoD converts operational experience into requirements that provides for Joint Logistics education?

3. What JPME is currently available to meet requirements?

4. Is this consistent with the needs of the force? How well do current and planned capabilities satisfy experience-based requirements?

5. What do we need that is not currently represented?

6. What is currently represented but not at the appropriate level?

Assumptions

1. Joint Logistics will remain a critical function in JF2020 Operations.

2. Future Joint Logistics operations must be conducted within the legal framework of Title 10 of the United States Code (USC) and in compliance with the Goldwater-Nichols Act of 1986.

3. The cognitive and affective levels of learning associated within the DoD professional military education system, having been accredited, are achieving the learning objectives.

4. The US Army Command and General Staff College (CGSC) is representative of sister service ILE institutions and joint educational programs are equivalent.

5. Budget and funding constraints will continue to impact the force across the DOTMLPF (Doctrine, Organization, Training, Materiel, Leadership, Personnel and Facilities) spectrum.

Definition of Terms

As a part of this thesis there are several terms that must be defined to provide a context for their use within this body of research. The criticality of a common logistics language across the joint services is illustrated by the 2011 publication of the “Joint Logistics Lexicon”, published by the Joint Staff, J4, Lieutenant General Kathleen Gainey. “The lack of a shared language has created or exacerbated many of the challenges to achieving the Logistics Community’s vision of integrated logistics capabilities and, ultimately, freedom of action for the joint warfighter.”⁶ This publication will serve as a baseline for both currently approved logistics terms (as per JP 1-02 Department of Defense Dictionary of Military and Associated Terms) as well as for developing logistics terminology. The following defined terms will provide context to the study and are significant to the readers understanding of this research.

Common User Logistics. Materiel or service support shared with or provided by two or more Services, Department of Defense agencies, or multinational partners to another Service, Department of Defense agency, non-Department of Defense agency, and—or multinational partner in an operation.⁷

Directive Authority for Logistics. Combatant commander authority to issue directives to subordinate commanders to ensure the effective execution of approved operation plans, optimize the use or reallocation of available resources, and prevent or

⁶ Joint Chiefs of Staff, J4 Logistics, “Joint Logistics Lexicon,” March 1, 2011, accessed September 2, 2014, <http://www.jcs.mil/Directorates/J4%7CLogistics.aspx>.

⁷ Joint Chiefs of Staff, Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: Government Printing Office, 2010 amended through August 2014).

eliminate redundant facilities and—or overlapping functions among the Service component commands. Also called DAFL.⁸

Executive Agent. A term used to indicate a delegation of authority by the Secretary of Defense (SecDef) or Deputy Secretary of Defense to a subordinate to act on behalf of the Secretary of Defense.⁹

Globally Integrated Operations. The concept for how the Joint Force should prepare for the security environment we will soon face.¹⁰

Interdependent. Not currently defined by doctrine.

Interoperability. (1) The ability to operate in synergy in the execution of assigned tasks.¹¹ (2) The condition achieved among communications-electronics systems or items of communications-electronics equipment when information or services can be exchanged directly and satisfactorily between them and—or their users. The degree of interoperability should be defined when referring to specific cases.¹²

Joint. Connotes activities, operations, organizations, etc., in which elements of two or more Military Departments participate.¹³

⁸ Ibid.

⁹ Ibid.

¹⁰ Chairman of the Joint Chiefs of Staff, *Capstone Concept for Joint Operations*, 4.

¹¹ Joint Chiefs of Staff, JP 1-02.

¹² Ibid.

¹³ Ibid.

Joint Interdependence. The purposeful reliance by one Service on another Service's capabilities to maximize complementary and reinforcing effects of both (i.e., synergy), the degree of interdependence varying with specific circumstances.¹⁴

Joint Logistics. The coordinated use, synchronization, and sharing of two or more Military Departments' logistic resources to support the joint force.¹⁵

Joint Logistics Enterprise. A multi-tiered matrix of key, global logistics providers existing at the strategic, operational, and tactical levels of war.¹⁶

Joint Logistics Environment. The joint logistics environment is the sum of conditions and circumstances that affect logistics.¹⁷

Joint Professional Military Education. The critical element in officer development and is the foundation of a joint learning continuum that ensures our Armed Forces are intrinsically learning organizations. The Professional Military Education (PME) vision understands that young officers join their particular Service, receive training and education in a joint context, gain experience, pursue self-development, and, over the breadth of their careers, become the senior leaders of the joint force. Performance and potential are the alchemy of this growth, but nothing ensures that they are properly

¹⁴ Joint Chiefs of Staff, Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: Government Printing Office, 2013).

¹⁵ Joint Chiefs of Staff, Joint Publication (JP) 4-0, *Joint Logistics* (Washington, DC: Government Printing Office, 2013).

¹⁶ Joint Chiefs of Staff, J4 Logistics, *J4 Joint Logistics Strategic Plan 2010-2014* (Washington, DC: Government Printing Office, 2010).

¹⁷ Joint Chiefs of Staff, JP 1-02.

prepared leaders more than the care given to the content of their training, education, experience, and self-development opportunities.¹⁸

Lead Service. A Service component or Department of Defense agency that is responsible for execution of common-user item or service support in a specific combatant command (COCOM) or multinational operation as defined in the combatant or subordinate joint force commander's operation plan, operation order, and—or directives.¹⁹

Logistics. (1) Planning and executing the movement and support of forces.²⁰ (2) Planning and executing the movement and support of forces. It includes those aspects of military operations that deal with: design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; acquisition or construction, maintenance, operation, and disposition of facilities; and acquisition or furnishing of services.²¹

Operational Environment. A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. Also called OE.²²

¹⁸ Chairman of the Joint Chiefs of Staff, *Officer Professional Military Education Policy (OPMEP)*, 2-3.

¹⁹ Joint Chiefs of Staff, JP 1-02.

²⁰ Ibid.

²¹ Department of the Army, Army Doctrinal Reference Publication (ADRP) 4-0, *Sustainment Operations* (Washington, DC: Government Printing Office, July 2012).

²² Joint Chiefs of Staff, JP 1-02.

Power Projection. The ability of a nation to apply all or some of its elements of national power-political, economic, informational, or military-to rapidly and effectively deploy and sustain forces in and from multiple dispersed locations to respond to crises, to contribute to deterrence, and to enhance regional stability.²³

Rationalization. Any action that increases the effectiveness of allied forces through more efficient or effective use of defense resources committed to the alliance.²⁴

Standardization. The process by which the Department of Defense achieves the closest practicable cooperation among the Services and Department of Defense agencies for the most efficient use of research, development, and production resources, and agrees to adopt on the broadest possible basis the use of:

1. Common or compatible operational, administrative, and logistic procedures.
2. Common or compatible technical procedures and criteria.
3. Common, compatible, or interchangeable supplies, components, weapons, or equipment.
4. Common or compatible tactical doctrine with corresponding organizational compatibility.²⁵

Scope

The scope of this study will be limited to a critical analysis of Joint Service Officer Professional Military Education programs. The research will investigate officer

²³ Joint Chiefs of Staff, Joint Publication (JP) 3-35, *Deployment and Redeployment Operations* (Washington, DC: Government Printing Office, 2013).

²⁴ Joint Chiefs of Staff, JP 1-02.

²⁵ Ibid.

professional military education at the intermediate level and will not address enlisted or non-commissioned officer education. This study will focus upon Joint Logistics requirements and opportunities. To allow for a manageable case study, the US Army's CGSC and the educational development process will be studied.

Limitations

This body of research will not consider data that is For Official Use Only (FOUO) or classified.

Delimitations

This research will determine if the current Joint Logistics Officer Professional Military Education program supports current and future DoD operational needs. Therefore, the subject size of this case study will be limited from Desert Storm (1991) until present (2014) reflecting the US Military's most recent conflicts. To predict future operational needs, this study will use National strategy, policy, and objectives to determine potential requirements.

Significance of the Study

This research is significant because it will provide a comprehensive study of the current JLPME representation within DoD at the intermediate level and determine if it is suitable to meet our current and future operational needs. The CJCS vision for the JF2020 calls for a responsive, agile, flexible, and increasingly interoperable force. As the US military prepares to meet this need in a time of fiscal constraints, it will do so while the

organizational structure adjusts to a smaller, “leaner” force.²⁶ Joint services will become increasingly dependent upon one another, which presents the need for shared understanding and ability to integrate capabilities, personnel, and systems. The assessment of JLPME is therein a critical component in determining the forces’ ability to meet our national strategy. Additionally, this study will provide a foundation for recommended improvements to the logistics opportunities within the current JPME program (if any) that may facilitate well sustained and globally integrated operations across the joint force in keeping with our National Strategic objectives.

The next chapter will review existing literature on this topic and provide an assessment of the significance of that material to this study. It will be followed by an explanation of the methodology to be used.

²⁶ Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (Washington, DC: Government Printing Office, 2012).

CHAPTER 2

LITERATURE REVIEW

The purpose of this research is to analyze current Joint Logistics Officer Professional Military Education and to identify if it is sufficient to meet the need of an increasingly jointly interdependent force. This chapter will examine strategy, source law and doctrine, proponent concepts, and review expert analysis within the field of logistics to identify how requirements for education are developed, how operational experiences are converted into requirements documents (if at all), and what JLPME currently exists. It will also review the opportunities and scope of current joint logistics educational opportunities in the resident institutional domain. This literature review will serve as the basis for a comparative analysis of what shortfalls (if any) exist based upon the examination of joint logistics learning areas identified through trends in strategy, proponentcy, and expert analysis.

Strategic Context

Priorities for 21st Century Defense

We derive the importance of Joint Logistic Officer Professional Military Education from our national strategic direction. As the President defined his desired strategic outcomes for the United States through his National Security Strategy, guidance issued by the SecDef in January 2012, “Sustaining U.S. Global Leadership: Priorities for 21st Century Defense,” called for a “Joint Force for the future that will be smaller and

leaner, but will be agile, flexible, ready, and technologically advanced.”²⁷ In a fiscally constrained environment, smaller and leaner while at the same time agile and flexible equates to one thing—interdependence. This capability requires a common understanding generated through doctrine, training and most importantly education.

Capstone Concept for Joint Operations

The CJCS in turn has placed a significant emphasis upon the military’s ability to conduct Globally Integrated Operations in the Capstone Concept for Joint Operations: Joint Force 2020.²⁸

Globally integrated operations emphasize organizational flexibility—that is, the ability of practically any unit to integrate with practically any other. But truly effective integration between Services requires familiarity, trust, and teamwork created by repeated joint training, as well as the precise combination of specialized skills.²⁹

The ability of units to integrate rapidly requires training. To conduct effective training, services must first gain a common understanding of the joint environment. This can only be achieved through joint education.

CJCS Vision for Joint Officer Development

In the last CJCS *Vison for Joint Officer Development* published in 2005, the CJCS redefined the term “joint” within the DoD. As it was redefined it is “the integrated employment of US and multinational armed forces and interagency capabilities in land,

²⁷ Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*.

²⁸ Chairman of the Joint Chiefs of Staff, *Capstone Concept for Joint Operations: Joint Force 2020*, 4.

²⁹ *Ibid.*, 15.

sea, air, and space and in both the human and virtual domains.”³⁰ The expanded scope of the term Joint implied a subsequent requisite knowledge by commanders and staff in managing and integrating a joint force in unified action. He discusses the need for joint staff officers to possess an “unprecedented ability to integrate diverse elements in a complex environment”³¹ leading to his call for the development of three joint-leader competencies: Strategically Minded, Critical Thinker, Skilled Joint Warfighter. These are common competencies that span across service and branch designation. The means to achieving these competencies was to be attained through a Continuum of Joint Learning grounded in four pillars: Joint Individual Training, JPME, Joint Experience, and Self-Development. The scope of this study is limited to JPME, however as each are interdependent activities within the continuum this study may touch upon the other pillars.

The CJCS describes JPME as the heart of Joint Officer Development and highlights joint education as a key activity for officers beginning at O-4 and continuing through O-6, specifically targeting the intermediate and senior levels of PME. While development of joint education is a focal point of his vision, he states that “joint officers are built on Service officers,”³² recognizing the provisions of Title 10 USC as well as reinforcing the value of service specific diversity as a strength rather than division. The joint officer described must be knowledgeable in both their service specific capabilities as

³⁰ Chairman of the Joint Chiefs of Staff, *CJCS Vision For Joint Officer Development* (Washington, DC: Joint Chiefs of Staff, 2005).

³¹ Ibid.

³² Ibid.

well as possessing the ability to think of capability in terms of the new more broadly defined joint environment. He suggests that the achievement of this vision would require changes to policies, instructions, and doctrine as well as changes to Title 10 USC. In order to understand the need for such changes, an examination of the legal foundations will be conducted later in this chapter. Since the publication of the CJCS Vision in 2005, the Army has maintained a steady state of high Operational Tempo fully engaged in conflicts in both Operation Iraqi Freedom and Operation Enduring Freedom, as well as humanitarian relief efforts in Operation Unified Response. This, coupled by budgetary constraints has delayed the regular publication of many of our strategic documents, concepts, and strategies. While there has not been another publication of the vision for joint officer development the publication of the Joint Education White Paper seven years later, identifies that the issue of providing strong joint education remained a priority for the DoD.

Joint Education White Paper

The Joint Education White Paper published by General Dempsey in July of 2012 further reinforced the imperative nature of a well-structured joint education system in a post Goldwater-Nichols era. “Joint education is essential to the development of our military capabilities. Today’s Joint Force is highly experienced, battle-tested body of men and women, with a decade of practical focused warfighting knowledge.”³³ The purpose of the white paper was to establish the importance of harnessing the lessons learned by an experienced force, and pursue ways to address cross service deficiencies identified in

³³ Chairman of the Joint Chiefs of Staff, *Joint Education White Paper* (Washington, DC: Joint Chiefs of Staff, 2012).

recent experience. The outcomes for Joint education centered on providing the force with the ability to understand the operational environment as well as the capabilities of all elements of national power.³⁴ For a joint logistician this would read as the ability to understand the Joint Logistics Environment (JLE) and understanding all elements of the JLEnt and suggest that understanding would be a result of joint education. While the importance of joint training is not undermined, the CJCS asserts the significance of joint education in the development of a force capable of meeting JF2020 attributes. Joint education provides the foundations necessary for joint officers to achieve appropriate levels of knowledge.

Joint Training Guidance

Trends in strategic direction and policy place JPME as a significant area of emphasis and focus to enable our current and future fighting force. JPME must also be consistent with Joint Training objectives. Joint training is a crucial link between the institutional and operational domains. In CJCS Notice 3500.01, 2014-2017 Chairman's Joint Training Guidance, General Dempsey discusses the need for training and education to align with his recently published Desired Leader Attributes (DLAs). The DLAs are:

1. The ability to understand the environment and the effect of all instruments of national power,
2. The ability to anticipate and adapt to surprise and uncertainty,
3. The ability to recognize change and lead transitions,
4. The ability to operate on intent through trust, empowerment, and understanding (mission command),

³⁴ Ibid.

5. The ability to make ethical decisions based on the shared values of the Profession of Arms,

6. The ability to think critically and strategically in applying joint warfighting principles and concepts to joint operations.³⁵

To specifically meet these common attributes, leaders must have trust, understanding, and the ability to rapidly apply knowledge of joint war fighting to the planning, preparation, and execution of joint operations. To rapidly apply knowledge of joint warfighting his guidance is broken down into subordinate warfighting functions and addresses critical areas for an effective Joint Force. Under Enclosure A, the CJCS High-Interest Training Issues, are defined in order to present operational focus areas that are consistent with strategic priorities.³⁶ One of the twelve issues he addresses is the need for training on the Joint Logistics Enterprise.

Full spectrum cross-domain capability is facilitated by a robust and effective sustainment system. Joint logistics must be routinely practiced to create and sustain proficiency. Exercises must include strategic and operational distribution, and deployment, to include deployment planning for organic and contracted forces at the operational and strategic levels of command. Employment of rapid port opening capabilities, to include seaport and airfield damage repair, should be exercised to improve our ability to establish, sustain, and recover expeditionary distribution networks. Ensure Operational Contract Support and joint medical support planning and execution are fully incorporated into joint training and exercises.³⁷

This training guidance clearly defines the required capability of a joint logistics force in supporting unified action. Training by definition provides the ability to practice

³⁵ Chairman of the Joint Chiefs of Staff, CJCS Notice 3500.01, *2014-2017 Chairman's Joint Training Guidance* (Washington, DC: Joint Chiefs of Staff, 2013).

³⁶ Ibid.

³⁷ Ibid.

skills. The foundations and baseline knowledge required to practice, must be provided through JPME and provide a complementary balance.

Universal Joint Task List

As joint training objectives are considered, the Universal Joint Task List (UJTL) provides joint task force commanders and staffs specific tasks that may be measured against end state conditions of unified action. For the sustainment warfighting function, there are four UJTL tasks: Perform Logistics and Combat Service Support, Provide Sustainment, Conduct Air Refueling, and Conduct Joint Logistics Over-the-Shore Operations (JLOTS). These tasks are general and do not have tangible measures of performance or effectiveness to assess readiness against. The UJTL tasks are loosely nested with our national strategy and consistent with educational objectives. The combatant commander's ability to conduct these tasks and sustain unified action is directly dependent upon the services' ability to integrate service logistic capability to a joint force while reducing redundancies and maximizing efficiency. The integration of service specific logistic capabilities must be accomplished legally and within the provisions of logistical authorities. In order to understand the complexity of integrating joint logistic capabilities the legal foundations for joint operations will be assessed later in this chapter.

As our national strategy is clearly calling for integration of service capabilities to allow for an interoperable force, this study will further examine how the services intend to provide for those requirements through their own concepts. This study will examine Army concepts for the JF2020.

Army Capstone Concept

The Army has aligned its Army Capstone Concept (ACC), TRADOC Pamphlet 523-3-0, published in December of 2012 with the strategic guidance and concepts expressed in the Capstone Concept for Joint Operations. The ACC describes the future operational environment (OE) as well as the Army's emerging role within the joint force. The future OE is identified as extremely complex and uncertain, and that the procurement of anti-access and area denial capabilities by our adversaries could hinder rapid deployment and force projection. Airports, seaports and logistical lines of communication will become key targets for adversaries to reduce combat power projection and prevent freedom of action.³⁸ The ACC specifically assesses the impact of that threat upon each warfighting function. The concept identifies critical sustainment capabilities. Sustainment forces must possess the ability to: mobilize, deploy, and conduct RSOI rapidly; have the capability to execute decentralized sustainment activities; maintain a shared visibility across the OE; possess the capability to provide the joint force common user logistics, port and terminal operations, detainee operations, mortuary affairs, postal administration, and provide sustainment forecasts to set and operate theaters in support of unified action; lastly, enable rapid combat power and regeneration.³⁹ While the concept is designed for Army specific capabilities, there is emphasis placed on providing logistical capabilities to the joint force. The specific identification for joint force common user logistics as well as other capabilities is extremely complex and requires knowledge of cross-service

³⁸ Headquarters, United States Training and Doctrine Command, TRADOC Pamphlet 525-3-0, *US Army Capstone Concept* (Fort Monroe, VA: United States Army Training and Doctrine Command, December 2012).

³⁹ Ibid.

capabilities and requirements. These needs should drive training and education which are the pillars to interoperability as identified by the CJCS.

Army Operating Concept

The Advanced Operations Course (AOC) further defines how Army forces will operate, to include their role in the Joint Force. The AOC guides development by identifying specific capabilities required by the force. The responsibilities of Army Sustainment forces include the ability to sustain high-tempo operations which ultimately enable our joint force to accomplish its strategic objectives.

Army sustainment units integrate efforts with the Joint Force to ensure unimpeded sustainment flows across the land, air, and maritime domains. These units provide supplies and services to the point of need to joint, Army, and multinational forces as well as interorganizational partners to ensure freedom of movement and action.⁴⁰

In order to enable unified action, the joint logistician must understand the flow of logistics from the industrial base to the services, as well as the capabilities and the requirements of our sister services and joint partners. The concept also calls for sustainment forces to understand the OE as it will be required to “sustain high tempo operations at the end of long and contested supply lines, [and] distribute supplies using capabilities that reduce vulnerability to ground interdiction.”⁴¹ This need requires logisticians who understand the JLE and can coordinate and improvise to ensure continuous flow of sustainment. The concept calls for strategic level visibility that links

⁴⁰ Headquarters, United States Training and Doctrine Command, TRADOC Pamphlet 525-3-1, *US Army Operating Concept: Win in a Complex World 2020-2040* (Fort Monroe, VA: United States Army Training and Doctrine Command, October 2014).

⁴¹ Ibid.

the tactical organization to the industrial base and elements of the JLEnt consistent with the ACC.

Functional Concept for Sustainment

The US Army Functional Concept for Sustainment 2016-2028, published in 2010 was designed to address the future of Army sustainment capabilities. The concept describes a sustainment force that “must be fully integrated with the joint force and must be able to leverage the capabilities of allied, partner, and host nation forces to ensure successful and sustained operations.”⁴² The concept describes the complex OE and calls for a force that is joint-knowledgeable.

Successful sustainment operations are dependent upon cooperation and integration of capabilities with joint, interagency, intergovernmental, multinational, host nation, NGO, private volunteer organizations (PVO), and contractor partners. These interdependencies are paramount to overcoming the challenges associated with the conduct of distributed operations over extended distances.⁴³

This implies a requisite knowledge and understanding of all partners within the JLEnt and a familiarity that allows rapid coordination and integration. The concept identifies several critical areas for integrated sustainment operations.

- Reduce the demand characteristics of the force.
- Conduct sustainment operations in concert with diplomatic, informational, and - economic efforts as part of a whole of government approach.
- Exploit joint and multinational interdependencies and interoperability.
- Consider environmental impacts.

⁴² Headquarters, United States Training and Doctrine Command, TRADOC Pamphlet 525-4-1, *The US Army Functional Concept for Sustainment 2016-2028* (Fort Monroe, VA: United States Army Training and Doctrine Command, October 2010).

⁴³ Ibid.

- Balance operational contract support.
- Enhance training and leader development.
- Enable leaders at lower echelons to make decisions.

As the ability to exploit joint and multinational interdependencies and interoperability are discussed, there are several key areas that are identified. There is a thorough discussion of the JLEnt that stresses the ability to understand and integrate the JLEnt as being a critical element to supporting the Joint Force Commander. Further the ability to operate using common supplies, standards procedures, and common processes is highlighted.⁴⁴ These requirements are broad and while simply stated, extremely difficult to achieve without significant education and training.

Joint logistics capabilities require interoperability across programs, systems, and forces, providing: known and shared knowledge concerning force readiness; decreased operational footprint in theater; increased force agility and survivability; decreased logistics demand; decreased cost of employing the force; improved data management and data integrity; increased asset visibility and property accountability; improved logistics pipeline management; increased force projection and sustainment; and increased speed and effectiveness of theater opening tasks.⁴⁵

The complex and extensive network of capabilities within the JLEnt can only begin to integrate when they are identified and understood by the joint logistics community. In the current security environment, combatant commanders stand up Joint Task Forces with minimal notice. The ability of logisticians to integrate, plan, and prepare to support unified action is dependent upon what level of education and experience they bring to the fight. Services' logistics systems are tailored to meet unique

⁴⁴ Ibid.

⁴⁵ Ibid.

operational needs, requiring detailed knowledge of capabilities and technical expertise. The ability to integrate services' logistics requires both a common understanding of the degrees of interoperability as well as the legality of common user functions and services. The purpose of this study is to assess if the current program of education is suitable for the joint force to accomplish these objectives, as identified by our national strategy. In order to understand the complexity of strategic objectives legal foundations must be assessed.

Legal Foundations

The ability of the Joint Force to operate interdependently is also a question of legal authority, most especially when it applies to logistics. The historical and legal foundations of the Joint Force can be seen through Title 10 USC and through the Goldwater-Nichols Act or Defense Reorganization Act of 1986, which significantly changed the way in which the DoD conducts joint operations. Reviews of Title 10 and the Goldwater-Nichols Defense Reorganization Act of 1986 (GNA) will be scoped to logistic responsibilities of the services as well as directives for JPME. With consideration to our nation's economic state and funding for the DoD, the Budget Control Act of 2011 and its impacts must be assessed. We must understand how service logistical capabilities are becoming increasingly constrained and how this is driving the push for joint interdependence.

Title 10 United States Code

Title 10 USC defines the roles of the services in the joint force and provides the legal foundation for joint operations. Subtitle A—General Military Law, Part I defines

organization and general military powers, which includes specific directives to each respective service. Within each respective service, there are specific responsibilities to include those that directly affect how logistical operations are executed. These legal authorities are the baseline for logistics authorities outlined in Joint Publication 4-0, Joint Sustainment, which will be discussed later in this chapter. Title 10, Subtitle A, Part IV, provides specifically for the service, supply and procurement of the armed forces. The “stovepipe” effect that resulted from Title 10 USC created conditions for service centric logistics and ultimately contributed to the climate that became a catalyst for the passing of the GNA.

The legal underpinnings of JPME are established in Title 10 USC, Subtitle A—General Military Law, Part III Training and Education, Chapter 107—Professional Military Education, Section 2152. This section provides the framework for the JPME of officers, as well as the development of Joint Military Education Schools. Title 10 does not directly address the JPME of non-commissioned officers or enlisted service members. As directed, the SecDef with assistance from the CJCS is charged with periodically revising the curriculum. Additionally, it specifies that PME schools within DoD should regularly revise curriculum for senior and intermediate grade officers to focus upon: “joint matters, and preparing officers for joint duty assignments.”⁴⁶ This directly establishes the need for regular revision to meet current and emerging needs of a joint fighting force.

⁴⁶ Office of the Law Revision Council, Title 10 United States Code-Part III, 1956, accessed September 23, 2014, <http://uscode.house.gov/browse/prelim@title10&edition=prelim>.

Goldwater-Nichols Act of 1986

The GNA reworked the command structure of the military. Inter-service rivalry had been problematic within the DoD during the post-Vietnam era as the DoD attempted to create a more unified force. Under Title 10 authority, services operated independently of each other often dividing unity of effort. Prior to the passage of GNA, the chain of command was aligned so as each service component would answer to their respective branch chiefs. With the reorganization of command and control systems, combatant commanders reported directly to the SecDef therein eliminating some of the division between services. The authority of combatant commanders expanded to include, “giving authoritative direction to subordinate commands and forces necessary to carry out missions assigned to the command, including authoritative direction over all aspects of military operations, joint training and logistics.”⁴⁷ The GNA streamlined the command structure, but did little to assist combatant commanders in establishing a unified logistics command structure by which to support operations, nor did it provide for unified funding and left the provision of logistics to each respective service.

The restructuring allowed for a more integrated joint force as well as placed a greater responsibility upon the CJCS in terms of both strategic and contingency planning for logistics. The CJCS became responsible for “Preparing joint logistic and mobility plans to support those strategic plans and recommending the assignment of logistic and mobility responsibilities to the armed forces in accordance with those logistic and

⁴⁷ 99th US Congress, Public Law 99-438, *Goldwater-Nichols Department of Defense Reorganization Act of 1986*.

mobility plans.”⁴⁸ Prior to the passage of GNA, there was no unified command structure to support the CCDRs ability to meet such a demand, as such it provided for the establishment of the only logistics command, Transportation Command (TRANSCOM). TRANSCOM effectively “combine[d] the transportation missions, responsibilities, and forces of the Military Traffic Management Command, the Military Sealift Command, and the Military Airlift Command.”⁴⁹ This realigned the chain of command for joint strategic deployment and transportation and created a more responsive network to meet combatant commander needs. Title 10 USC service specific responsibilities, however, remained unchanged creating more of a parallel command structure rather than unified.

It is important to note that the CJCS also assumed responsibility for the development of joint doctrine, training and, “formulating policies for coordinating the military education and training of members of the armed forces.”⁵⁰ The passage of GNA rewired the command structure to allow for a greater degree of interoperability between services. Issues of funding and legal authorities for the provision of logistics across the joint force, however; remained unchanged and in the authority and direction of the services.

Budget Constraints

While Title 10 established the baseline for services to organize, supply, equip, etc., how effectively they are able to do this is dependent upon the national budget. The

⁴⁸ Ibid., Section 153, Chairman: functions.

⁴⁹ Ibid., Section 212, Initial Review of Combatant Commands.

⁵⁰ Ibid., Section 153 Chairman: functions.

Defense Budget Priorities and Choices—Fiscal Year 2014, outlines the significance of the Budget Control Act of 2011 and the subsequent impact upon the triage of defense spending. The report estimated reductions in defense spending would equate to an approximate 20 percent decline between 2010 and 2017. “The DoD is experiencing declining budgets that have already led to significant ongoing and planned reductions in military modernization, force structure, personnel costs, and overhead expenditures.” Looking at these cuts through a logistical lens, it requires services to find ways within their own structures to balance readiness with economy. “When measured in real terms against the growing cost of personnel, health care, and weapons, this represents a marked decrease in defense purchasing power compared to the past decade.”⁵¹ In light of an increasingly complex security environment, this will be no easy endeavor. It will require innovative solutions that extend outside the current structure that limits force sustainment options.

The Defense Department can, and must, continue to find new ways to operate more affordably and efficiently. However, multiple reviews and analyses show that additional major cuts—especially those on the scale and timeline of sequestration—would require dramatic reductions in core military capabilities. Indeed, reductions on this scale would require the Department to manage risk, readiness, and mission requirements in a fundamentally different way than the U.S. military has been accustomed to since the end of the Cold War. It would also require a re-thinking of America’s security obligations and role in the world.⁵²

The need to scale the DoD to a small, leaner, more interoperable force while at the same time reducing spending poses significant challenges for combatant commanders

⁵¹ Department of Defense, “Defense Budget Priorities and Choices - Fiscal Year 2014.”

⁵² Ibid.

and the supporting logistics community operating within the constraints of Title 10 USC and GNA.

Logistical Authorities

Logistical Authorities are further established for the Joint Force through joint doctrine, specifically outlined in JP 4-0, Joint Logistics. “The fundamental role of joint logistics is to integrate and coordinate logistics capabilities from Service, agency, and other providers of logistics support, and to facilitate execution of the Services’ Title 10, USC, responsibilities while supporting the ever-changing needs of the JFC.”⁵³ This requires that a joint logistician understand how each of its sister services conducts logistics as well as their logistical organizational structure and capabilities.

For the Army, the Theater Sustainment Command (TSC) is the logistic command for the Army and is responsible for a wide array of functions that requires the ability to integrate with joint services.

The TSC is responsible for executing port opening, theater opening, theater surface distribution, and sustainment functions in support of Army forces and provides lead Service and EA support for designated common user logistics to other government departments and agencies, multinational forces, and NGOs as directed.⁵⁴

As such, logistical planners require a degree of understanding of joint capabilities and requirements. By doctrine, the Army is capable of operating as the logistic headquarters for the JFC if required. To be capable of providing support to the joint force, the staff must understand the authorities by which it may operate. As established

⁵³ Joint Chiefs of Staff, Joint Publication (JP) 4-0, *Joint Logistics* (Washington, DC: Government Printing Office, 2013).

⁵⁴ Ibid.

by Title 10, each service is responsible for their own logistics. The ability to integrate service capabilities requires further clarification. JP 4-0, Joint Logistics, identifies several logistics authorities that have been established to provide the combatant commander a greater degree of flexibility in how he may direct joint logistics. These authorities include: executive agent, lead service, directive authority for logistics (DAFL). Additionally, services may be directed to provide Common User Logistics which is logistics provided to two or more services, agencies, or multi-national partners. JP 4-0 establishes specific services as Logistical Executive Agents which are outlined in Appendix E, JP 4-0.

For a Joint Logistician to rapidly integrate capabilities and provide logistic support across services, they must understand how they may execute that support. Without a fundamental knowledge of these authorities, planning and execution of joint logistics cannot be coordinated and synchronized effectively. The need to understand the JLE and its foundations is clearly identified. It must then be assessed how this need is translated into JPME.

JPME Development

Title 10 USC and the GNA provide for the development of JPME and provide the authority to direct requirements to the SecDef and the CJCS. The process by which the CJCS develops JPME is a foundation for understanding how and why specific requirements for the joint community are directed. As outlined by national strategy, the development of the joint officer is critical to the ability to conduct globally integrated operations rapidly and responsively.

Officer Professional Military Education Policy

Specific responsibilities as defined by Title 10, USC require the CJCS to “Advise and assist the Secretary of Defense by periodically reviewing and revising the curriculum of each school of NDU, and of any other JPME school to enhance the education and training of officers in joint matters (section 2152, reference b).”⁵⁵ JPME is the foundation for joint interoperability. It establishes trust, common understanding and exposure to the capabilities, systems, and processes of sister services. The Officer Professional Military Education Policy (OPMEP) establishes requirements for a well-educated joint force in order to enable officers to operate at all levels of war within joint force commands.

Officer Professional Military Education, its programs and objectives are established through the Chairman of the Joint Chiefs of Staff Instruction (CJCSI 1800.01D) last published in 2011, which outlines the military’s OPMEP. The OPMEP “defines CJCS objectives and policies regarding the educational institutions that comprise the officer PME and JPME systems. The OPMEP also identifies the fundamental responsibilities of the major military educational participants in achieving those objectives.”⁵⁶ The scope of the policy covers all service components, international officers, as well as intergovernmental agency students and addresses JPME from precommissioning through G—FO levels.⁵⁷ PME—JPME consists of five levels. The scope of this study will only address the intermediate level:

⁵⁵ Chairman of the Joint Chiefs of Staff, *Officer Professional Military Education Policy (OPMEP)*, 2-3.

⁵⁶ Ibid., A-1.

⁵⁷ Ibid.

1. Precommissioning. Military education received at institutions and through programs producing commissioned officers upon graduation.
2. Primary. Education typically received at grades O-1 through O-3.
3. Intermediate. Education typically received at grade O-4.
4. Senior. Education typically received at grades O-5 or O-6.
5. General—Flag Officer (G—FO). Education received as a G—FO.58

The OPMEP further details the appropriate focus and emphasis of JPME nested within each respective services' PME program.

ANNEX A TO APPENDIX A TO ENCLOSURE A

CJCSI 1800.01D
15 July 2009

GRADE	CADET/SHIPMAN	O-1O-2O-3	O-4	O-5O-6	O-7O-8O-9
EDUCATION LEVEL	PRECOMMISSIONING	PRIMARY	INTERMEDIATE	SENIOR	GENERAL/FLAG
EDUCATIONAL INSTITUTIONS AND COURSES	Service Academies ROTC OCS/OTS	<ul style="list-style-type: none"> Branch, Warfare or Staff Specialty Schools Primary-Level PME Courses 	<ul style="list-style-type: none"> Air Command and Staff College Army Command and General Staff School College of Naval Command and Staff Marine Corps Command and Staff College JFSC, Joint and Combined Warfighting School, AJPME 	<ul style="list-style-type: none"> Air War College Army War College College of Naval Warfare Marine Corps War College Industrial College of the Armed Forces National War College JFSC, Joint and Combined Warfighting School, AJPME JFSC, Joint Advanced Warfighting School 	<ul style="list-style-type: none"> CAPSTONE Joint Functional Component Commander Courses SJICAC Joint Flag Officer Warfighting Course Pinnacle
LEVELS OF WAR EMPHASIZED	Conceptual Awareness of all Levels				
		TACTICAL	OPERATIONAL	STRATEGIC	
FOCUS OF MILITARY EDUCATION	Introduction to Services Missions	<ul style="list-style-type: none"> Assigned Branch, Warfare or Staff Specialty 	<ul style="list-style-type: none"> Warfighting within the context of Operational Art Intro to theater strategy and plans, national military strategy and national security strategy Develop analytical capabilities and creative thought 	<ul style="list-style-type: none"> Service Schools: strategic leadership, national military strategy and theater strategy NWC: national security strategy ICAF: national security strategy with emphasis on the resource components 	<ul style="list-style-type: none"> Joint matters and national security Interagency process Multinational operations
JOINT EMPHASIS	<ul style="list-style-type: none"> Joint Introduction National Military Capabilities and Organization Foundation of Joint Warfare 	<ul style="list-style-type: none"> Joint Awareness Joint Warfare Fundamentals Joint Campaigning 	<p>JPME Phase I</p> <ul style="list-style-type: none"> National military capabilities command structure and strategic guidance Joint doctrine and concepts Joint and multinational forces at the operational level of war Joint planning and execution processes Joint Command and Control (C2) Joint Operational Leadership 	<p>JPME Phase II</p> <ul style="list-style-type: none"> National security strategy National planning systems and processes National military strategy and organization Joint strategic leader development National Planning Systems and Processes Joint Warfare, Theater Strategy and Campaigning Integration of Joint, Interagency, Intergovernmental, and Multinational Capabilities <p>AJPME</p> <ul style="list-style-type: none"> National security strategy Joint, Interagency, Intergovernmental, and Multinational Capabilities Theater strategy and campaigning Joint planning processes and systems 	<p>CAPSTONE</p> <ul style="list-style-type: none"> National security strategy Joint operational art Joint Functional Component Commander Courses & JFOWC National security strategy National planning systems and organization National military strategy & organization Theater strategy, campaigning and military operations in Joint, interagency, intergovernmental, and multinational environment Information operations Strategic leader development Pinnacle Joint/Combined force development Building & commanding the joint combined force The JFC and the IA, NCA, NMS

¹ICAF, NWC, and JAWS offer single-phase JPME

A-A-A-1

Appendix A
Enclosure A

Figure 1. Officer Professional Military Education Continuum

Source: Chairman of the Joint Chiefs of Staff, *Officer Professional Military Education Policy (OPMEP)* (Washington, DC: Government Printing Office, 2011), A-A-A-2.

⁵⁸ Ibid., A-A-5.

Within the OPMEPs JPME continuum, specific levels are defined as appropriate at certain rank and grade spanning the tactical, operational and strategic levels of war.

The intermediate level focuses upon the tactical and operational levels with the introduction of strategic concepts.

Intermediate. JPME Phase I focus upon joint operations from the perspective of each service and is administered by Service Colleges. JPME Phase II is offered at the Joint and Combined Warfighting School (JCWS).⁵⁹

All officers are required to complete up to JPME Phase I education. Joint Qualification can be attained through JPME Phase II and all officers selected for promotion to G—FO must attend CAPSTONE within two years of selection.⁶⁰ The OPMEP, though prescriptive in nature, is a broad sweep of general education requirements for the joint community.

The OPMEP specifically identifies Intermediate PME accredited institutions and courses as:

1. Air Command and Staff College (ACSC).
2. Army Command and General Staff College (ACGSC).
3. College of Naval Command and Staff (CNCS) at the Naval War College.
4. Marine Corps Command and Staff College (MCCSC).
5. Service-recognized equivalent fellowships, advanced military schools, and international military colleges.⁶¹

For the purpose of this study, it has been assumed that the coverage of JPME learning areas at each of the aforementioned service colleges is equivalent to that of the

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Ibid., A-A-3 to A-A-4.

Army CGSC. The intermediate level, as with each other levels, has a specific focus as well as learning areas directed by the OPMEP to be covered. This focus guides the development of specific learning areas and objectives that are required for the joint community.

Intermediate education focuses on warfighting within the context of operational art. Students expand their understanding of joint force deployment and employment at the operational and tactical levels of war. They gain a better understanding of joint and Service perspectives. Inherent in this level is development of an officer's analytic capabilities and creative thought processes. In addition to continuing development of their joint warfighting expertise, they are introduced to joint plans, national military strategy, joint doctrine, joint command and control, and joint force requirements.⁶²

The goal of intermediate education is to provide understanding of joint capabilities in the joint environment. It does not provide for any specific requirements by warfighting function. The six learning areas developed to meet the focus of education for intermediate level officers are addressed in Appendix C to Enclosure E. Within each learning area there are subordinate learning objectives that are further defined to enable mastery of the learning area. The six learning areas for intermediate level officer education are:

Learning Area 1–National Military Capabilities, Command Structure, and Strategic Guidance.

Learning Area 2–Joint Doctrine and Concepts.

Learning Area 3–Joint and Multinational Forces at the Operational Level of War.

Learning Area 4–Joint Planning and Execution Processes.

Learning Area 5–Joint Command and Control.

⁶² Ibid., A-A-4.

Learning Area 6–Joint Operational Leadership.⁶³

These learning areas will serve as the foundation for the comparative analysis of the DoD directed educational requirements in chapter 4 of this study. The OPMEP is the sole source document for directed joint educational requirements in the DoD and is designed to meet development of the joint officer over the long term. It does not provide flexibility in developing requirements to address the short term operational needs of the joint community.

Special Areas of Emphasis

In addition to the OPMEP, the CJCS establishes special areas of emphasis (SAE) for JPME. These SAE provide the CJCS with the ability to target critical gaps in knowledge that may exist without the publication of a new OPMEP. The 2010 JPME SAE, developed by the Military Education Coordination Council (MECC), and later approved by the CJCS, define areas that are lacking in the current program of education, but are critical to current and future short term operations. The CJCS's SAE 5 is the only specific logistic area of emphasis addressed. SAE 5 is Operational Contract Support and describes specific learning objectives required for intermediate and senior level leaders. Intermediate level education on Operational Contract Support should address:

[B]asic operational contract support planning, including requirements definition, as well as basics in contract principles governing contracting organizations and responsibilities, contract award and contract administration, ethical considerations in dealing with contractors, and integration of contracting organizations and contractors into all levels of operational planning and training. ILCs will

⁶³ Ibid., E-C-1 to E-C-3.

specifically address the role of contractors and the administration of contracts at the tactical and operational level, in contingency and deployed settings.⁶⁴

The Operational Contract Support is a consistent area focused upon in the CJCS training guidance linking defined focus areas between training and education as well as the Army's Functional Concept for Sustainment. It must then be further investigated how those requirements are translated into courseware and curriculum and how specific deficiencies in the educational program may be addressed.

J7—MECC

The Joint Chiefs of Staff utilize the OPMEP as a baseline for development of PME. The J7, Joint Force Development Directorate is responsible for several core functions to include: Joint Training and Exercising, Joint Education, Joint Doctrine, Joint Lessons Learned, and Joint Concepts.⁶⁵ JPME development is a collaborative effort that leverages expertise from across the services and warfighting functions. The J7 develops policies and is responsible for the development of JPME across the services. The MECC serves as the primary advisory body to the Director, Joint Staff for all joint education issues and initiatives. The MECC consists of principals and a MECC Working Group. The MECC principals are the "DJ-7, the DDJS-ME, the presidents, commandants, and directors of the joint and Service universities and colleges and the heads of any other

⁶⁴ Chairman of the Joint Chiefs of Staff, *2010 Joint Professional Military Education (JPME) Special Areas of Emphasis (SAEs)* (Washington, DC: Government Printing Office, 2010), 7-9.

⁶⁵ Joint Chiefs of Staff, J7 Joint Force Development, accessed September 15, 2014, <http://www.jcs.mil/Directorates/J7%7CJointForceDevelopment.aspx>.

JPME-accredited institutions as well as any other representatives from other commands and organizations as the MECC Chairman deems appropriate.”⁶⁶

The MECC Working Group supports the MECC through the preparation and dissemination of information related to the MECC, and serves as a forum for issues of mutual interest.⁶⁷ Chaired by the Chief, Joint Education Branch, J7 the working group consists of representatives of the MECC principals, typically O-6 or dean-level civilian counterparts.⁶⁸ The MECC Distance Learning Coordination Committee (DLCC), advises the MECC Working Group on issues involving Distance Learning (DL). The DLCC consists of all deans and directors of DL programs at the intermediate and senior level.⁶⁹

The OPMEP directs the broad educational objectives to the joint community, the MECC serves as a means to coordinate and collaborate on joint education issues and initiatives. The MECC serves as a critical link between the services and the joint community, providing joint educational outcomes.

TRADOC

The respective services are responsible for their own PME programs and the incorporation of JPME into the curriculum. As directed by Army Regulation 350-1, Army Training and Leader Development, the Commanding General of the Army’s

⁶⁶ Joint Chiefs of Staff, “Military Education and Coordination Council,” Joint Electronic Library, accessed September 15, 2014, http://www.dtic.mil/doctrine/education/edu_comm_wgs.htm.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Ibid.

Training and Doctrine Command (TRADOC) serves as the Army's proponent for the Army Training and Education Development Process.⁷⁰ TRADOC has published TRADOC PAM 350-70-7, Army Educational Process to establish a guiding process to the development of educational programs. "It presents general principles of education using analysis, design, development, implementation, and evaluation (ADDIE)."⁷¹ This pamphlet serves as a guide in the development of curriculum and applies to all The Army School Systems (TASS) institutions. The ADDIE process serves as a central component to the Accountable Instruction System (AIS), which ensures the achievement of educational outcomes. Of the five step process, the analysis phase serves to determine the objectives for the course and is where joint learning objectives are assessed for inclusion.

⁷⁰ Department of the Army, Army Regulation (AR) 350-1, *Army Training and Leader Development* (Washington, DC: Government Printing Office, 2014).

⁷¹ Headquarters, United States Training and Doctrine Command, TRADOC Pamphlet 350-70-7, *Army Educational Process* (Fort Monroe, VA: United States Army Training and Doctrine Command, January 2013).

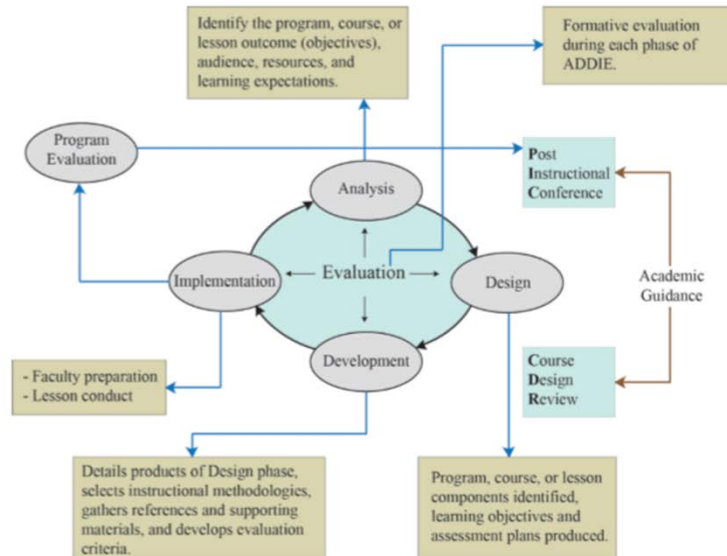


Figure 2. Accountable Instruction System

Source: Headquarters, United States Training and Doctrine Command, TRADOC Pamphlet 350-70-7, *Army Educational Process* (Fort Monroe, VA: United States Army Training and Doctrine Command, January 2013), 8, Figure 2-1.

Broad educational outcomes are processed through the AIS and subsequently Terminal Learning Objectives (TLOs) are developed. TLOs are designed to collectively achieve the educational outcomes and provide benchmarks from which to evaluate achievement of the learning objectives. Enabling Learning Objectives (ELOs) are also developed to prerequisites for learning that support each TLO.

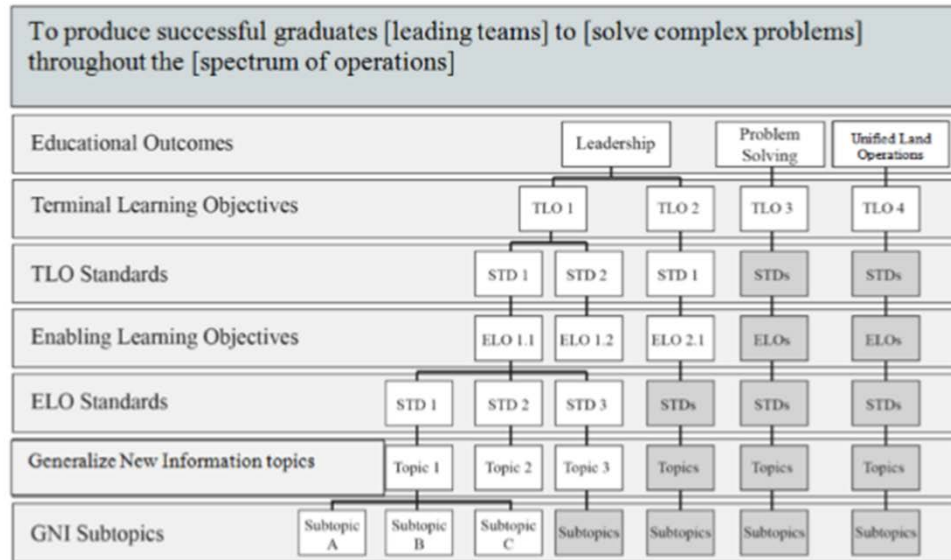


Figure 3. Hierarchy of Educational Outcomes, Objectives, and Standards

Source: Headquarters, United States Training and Doctrine Command, TRADOC Pamphlet 350-70-7, *Army Educational Process* (Fort Monroe, VA: United States Army Training and Doctrine Command, January 2013), 9, Figure 2-2.

During the design phase, learning objectives are developed. Learning objectives must include, “a precise statement of the student’s expected learning (action), the learning environment (condition), and the measure of student achievement (standard), of the prescribed level of learning and domain.”⁷² The learning objectives are then categorized through one of three learning domains. The learning domains are cognitive, affective, and psychomotor. Psychomotor typically refers to skills that are trained and is not used to assess learning objectives. The affective domain refers to “emotions, beliefs,

⁷² Ibid., 33.

attitudes, and feelings.”⁷³ The cognitive domain is that where intellectual skills are developed. Intellectual skills are further defined to consist of, “discrimination, concept, rule-using, and problem-solving capabilities.”⁷⁴ As learning objectives pass through the learning domains those within the affective domain are assessed by Krathwohl’s Taxonomy, which uses five learning levels: receiving, responding, valuing, organization, and characterization by value.⁷⁵ Objectives residing in the cognitive domain are assessed using Bloom’s Taxonomy, which applies six levels of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation.⁷⁶ The following information has been extracted from the OPMEP into Figures 4 and 5 to provide context for further analysis in chapter 4 of this study:

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Ibid, 34.

⁷⁶ Ibid.

a. Cognitive Domain (Mental skills - Knowledge)		
Level	Illustrative Level	Definitions
Knowledge	arrange, define, describe, identify, know, label, list, match, memorize, name, order, outline, recognize, relate, recall, repeat, reproduce, select, state	Remembering previously learned information.
Comprehension	classify, comprehend, convert, define, discuss, distinguish, estimate, explain, express, extend, generalize, give example(s), identify, indicate, infer, locate, paraphrase, predict, recognize, rewrite, report, restate, review, select, summarize, translate	Grasping the meaning of information.
Application	apply, change, choose, compute, demonstrate, discover, dramatize, employ, illustrate, interpret, manipulate, modify, operate, practice, predict, prepare, produce, relate, schedule, show, sketch, solve, use, write	Applying knowledge to actual situations.
Analysis	analyze, appraise, breakdown, calculate, categorize, classify, compare, contrast, criticize, derive, diagram, differentiate, discriminate, distinguish, examine, experiment, identify, illustrate, infer, interpret, model, outline, point out, question, related, select, separate, subdivide, test	Breaking down objects or ideas into simpler parts and seeing how the parts relate and are organized.
Synthesis	arrange, assemble, categorize, collect, combine, comply, compose, construct, create, design, develop, devise, explain, formulate, generate, plan, prepare, propose, rearrange, reconstruct, relate, reorganize, revise, rewrite, set up, summarize, synthesize, tell, write	Rearranging component ideas into a new whole.
Evaluation	appraise, argue, assess, attach, choose, compare, conclude, contrast, defend, describe, discriminate, estimate, evaluate, explain, judge, justify, interpret, relate, predict, rate, select, summarize, support, value	Making judgments based on internal evidence or external criteria.

Figure 4. Cognitive Domain (Mental Skills–Knowledge)

Source: Chairman of the Joint Chiefs of Staff, *Officer Professional Military Education Policy (OPMEP)* (Washington, DC: Government Printing Office, 2011), E-A-1 to E-A-4.

b. Affective Domain (Growth in feelings or emotional areas - Attitude)		
Level	Illustrative Level	Definitions
Receiving	ask, choose, describe, follow, give, hold, identify, locate, name, point to, select, sit, erect, reply, use	Awareness, willingness to hear, selected attention.
Responding	answer, assist, aids, comply, conform, discuss, greet, help, label, perform, practice, present, read, recite, report, select, tell, write	Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation).
Valuing	complete, demonstrate, differentiate, explain, follow, form, initiate, invite, join, justify, propose, read, report, select, share, study, work	The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges from simple acceptance to the more complex state of commitment. Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's overt behavior and are often identifiable.
Organization	adhere, alter, arrange, combine, compare, complete, defend, explain, formulate, generalize, identify, integrate, modify, order, organize, prepare, relate, synthesize	Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The emphasis is on comparing, relating, and synthesizing values.
Internalizing	act, discriminate, display, influence, listen, modify, perform, practice, propose, qualify, question, revise, serve, solve, verify	Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).

Figure 5. Affective Domain (Growth in Feelings or Emotional Areas–Attitude)

Source: Chairman of the Joint Chiefs of Staff, *Officer Professional Military Education Policy (OPMEP)* (Washington, DC: Government Printing Office, 2011), E-A-1 to E-A-4.

The learning levels of achievement as defined by the OPMEP provide a measurable standard of learning for each objective. These will provide a basis for evaluation of current programs in the analysis to be conducted in chapter 4 of this study. Understanding the process by which joint educational requirements are developed is a critical foundation in assessing what joint education currently exists and for further

examination into why there may potentially be shortfalls in the current program of instruction.

The Proponents

National Strategy has placed a significant emphasis on the ability of the joint force to be interdependent and interoperable. In order to properly assess how Joint Logistics nests into those requirements, it is essential to look at the proponents for logistics. The J4, Logistics is responsible for leading the logistics enterprise at the Joint Level. The J4 has published specific focus areas through the 2012 Annual Guidance, a J4 strategic plan, Joint Concept for Logistics, and Joint Logistics Lexicon. The G4, Logistics is responsible for leading the logistics enterprise at the Army service level. The G4 has published priorities and focus areas. The Army's proponent for Joint Logistics, the Combined Arms Support Command (CASCOM) has published a White Paper on *Globally Responsive Sustainment* that identifies priorities and critical focus areas for the Army's logistic force. It is necessary to assess the current operational and strategic objectives of the J4 and G4 in order to better put into context how the current JPME focus areas relate to logistic objectives.

J4 Annual Guidance

Last published in 2012, the *J4 Annual Guidance* provided guidance for the J4 directorate as well as the JLEnt in both "focus of effort and allocation of resources."⁷⁷ Lieutenant General Bash, J4, emphasized the Army as being in a period of significant

⁷⁷ Joint Chief of Staff, J4 Logistics, *2012 Annual Guidance* (Washington, DC: Government Printing Office, 2012).

change. “Our security environment, characterized by budget constraints and shifting world threats, requires strong logistics leadership, innovative thinking, and determined use of all available resources to best support the Chairman of the JCS and the Joint Force Commanders.”⁷⁸ To achieve this vision, he provides the logistics community with four Focus Areas:

1. COCOM Advocacy: Support development of strategy and operational logistics solutions.
2. Readiness: Develop a logistics readiness assessment to guard against a “hollow force.”
3. Joint Force 2020: Identify logistics capabilities for Joint Force 2020 that assure an agile, flexible, ready, technologically advanced and reversible force.
4. Our Organization: Align J-4 resources and communicate to maximize effectiveness.

The topic of COCOM advocacy calls for the use of “successful joint solutions”⁷⁹ to support COCOMs while maintaining respect to Title 10 responsibilities of each of the services. This directive is complex due to the legal implications of Title 10, and forces planners to assess the appropriateness, use and implications of executing logistical authorities to support COCOMs. In order to provide logistics solutions, logistical planners must understand the legality of support between and to services. The guidance specifically directs to “guard against a hollow force, characterized by an expectation of capability when in fact the capacity and capability do not meet expectations.”⁸⁰ Expectations then must then be addressed and clearly defined. The guidance defines three

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Ibid.

year-end results: “principles of Joint logistics readiness are defined and incorporated into JP 4-0, developed and implemented a methodology to strategically assess logistic aspects of joint readiness, and common Joint logistics readiness metrics are defined.”⁸¹ With the most recent publication of JP 4-0 in October of 2013, it appears that the first goal was achieved, however; this research was unable to attain documentation that the other goals were achieved. Finally, as the JF2020 is addressed, the concept of developing a “strategy for career logistician education”⁸² enters the literature but does not provide any more than a need.

Joint Logistics Strategic Plan

A new concept most recently identified by the Joint Logistics Strategic Plan 2010-2014, is the “Joint Logistics Enterprise, a multi-tiered matrix of key, global logistics providers existing at the strategic, operational, and tactical levels of war.”⁸³ This JLEnt is comprised of DoD Logistic Partners, Nongovernmental Organizations, Multinational Partners, Interagency Partners, and the Industrial base. The strategic plan outlines three goals: (1) to provide joint logistics strategic direction, (2) deliver joint logistics capabilities, and (3) to develop the organization and our people.⁸⁴ The objective of the joint logistics strategic direction is to promote a shared understanding and common language through policy, doctrine, strategy as well as to strengthen strategic relationships

⁸¹ Ibid.

⁸² Ibid., 3.

⁸³ Joint Chiefs of Staff, J4 Logistics, *J4 Joint Logistics Strategic Plan 2010-2014*.

⁸⁴ Ibid.

and communications. In order to understand the complexity of the JLEnt and sustain globally integrated operations, joint logisticians should have exposure to and a foundational understanding of the JLEnt. Sustained operations of over the last decade have shown the flexibility and adaptability of our nation's fighting force, however; it has also identified how redundancies in capability and lack of interoperability have come at the cost of time, money, and human capital. The third goal to develop the organization and "our people,"⁸⁵ specifically defines education as a key objective. "Provide opportunities for Department of Defense civilians and military members to access the training required to best execute their responsibilities and further their professional development through various job opportunities in order to learn and grow in technical expertise and leadership roles."⁸⁶ Education is clearly a critical enabler to the logistics community in achieving our national strategic vision for the JF2020.

Joint Concept for Logistics

The publication of the Joint Concept for Logistics in 2010 by Lieutenant General Gainey, J4, presents a vision and framework for how logistics will enable the force as defined by the Chairman of the Joint Chief of Staff's *Capstone Concept for Joint Operations*. Since the invasion of Iraq in 2003, sustained military operations across multiple theaters have illustrated the need for coordinated and synchronized logistics across the services. How the joint services have operated within the complexity of our

⁸⁵ Ibid.

⁸⁶ Ibid.

current operational environment has presented challenges for the Joint Force commanders that are clearly defined by the concept's opening problem statement:

How can Joint Force Commanders and DOD integrate or synchronize and optimize joint, interagency, multinational, nongovernmental, and contracted logistics to simultaneously establish and maintain multiple Joint Force Commanders' operational adaptability and freedom of action in the design, execution and assessment of concurrent combat, security, engagement, and relief and reconstruction mission in an environment characterized by increasing complexity, uncertainty, rapid change, and persistent conflict?⁸⁷

The concept highlights a significant need for change to all elements of the DOTMLPF-P (Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Policy). It is based upon the "Joint Logistics Compass" or guidance compiled from logistic directors across the DoD. It envisions the creation of a scalable joint capability. "Understating the roles, responsibilities, and authorities of JLEnt partners is essential to planning, executing, controlling, and assessing logistic operations."⁸⁸ In order to meet this need there must be education across the joint force to enable efficient and appropriate planning by the logistics community. The call for education is clearly outlined in the concept.

Logisticians must be capable of speaking a shared language based on core common processes. They must be trained to be agile and knowledgeable of the common core processes, joint information technology tools, and the Service unique tools regardless of component. Joint logistic education and development must be imbedded in joint, Service, agency, professional military, civilian, career courses, and functional schools. The outcome will be a trained logistician capable of operating within a common joint frame of reference and lexicon.⁸⁹

⁸⁷ Joint Chiefs of Staff, J4 Logistics, *Joint Concept for Logistics* (Washington, DC: Government Printing Office, 2010).

⁸⁸ Ibid., 12.

⁸⁹ Ibid., 16-17.

As these critical learning areas for logisticians are defined by the J4, how the services nest those concepts and prioritize them within their own service culture and academic institutions must be assessed.

The G4

The United States Army G4, Logistics, published *G-4 Top Priorities and Focus Areas* in 2013 to establish Logistics priorities for the Army. The priorities established include: sustainment support to current operations and COCOMs, improvement of property accountability policies, processes and programs, implement a Single Army Logistics Enterprise (SALE) to streamline accountability through GCSS-Army, and to synchronize, integrate and sustain operational energy requirements across the force.⁹⁰ All four of these priorities are service specific. The focus areas widen the aperture to look at both the Army itself and as a part of the larger JLEnt. The focus areas established are to accomplish several goals which include: foster the development of adaptive and innovative Logisticians; adapt logistics structure, processes, and policies to win the fight and maintain responsiveness for contingencies, drive logistics innovation; influence the TAA, POM, and ACP to improve Army readiness; set conditions to sustain a viable Organic Industrial Base, structured to meet future requirements, and to expand and leverage relationships with out National Partners—AMC, Combined Arms Support Command (CASCOM), DLA, AAFES, DECA, USTC, Joint Log Community (COCOMs) and Allies.⁹¹ In order to properly understand how these focus areas and

⁹⁰ G4 Top Priorities and Focus Areas, 2013.

⁹¹ Ibid.

priorities are developed within the Army's educational program, it is critical to assess the priorities of the Army's proponent for Joint Logistic Education.

CASCOM—Globally Responsive Sustainment

The US Army's CASCOM's mission is to “train, educate and grow adaptive sustainment professionals; develops and integrates Army and Joint Sustainment capabilities, concepts and doctrine to enable Unified Land Operations”.⁹² As such, CASCOM assumes responsibility for ensuring that joint logistic educational opportunities are developed and implemented within the Army PME program. The commanding general, Major General Larry Wyche, established priorities for the organization still current as of 2014 that include sustainment training and education, concepts and doctrine, as well as army and joint sustainment training to achieve the organization's mission.⁹³

Army 2020 and Beyond Sustainment White Paper: *Globally Responsive Sustainment*, published by Major General Wyche in August of 2013, sought to drive discussion of the requirements and capabilities of a sustainment force in a rapidly changing Army and DoD. Intended to answer the Capstone Concept for Joint Operations' call for Globally Integrated Operations, *Globally Responsive Sustainment* was developed to “produce a sustainment system that is optimized, integrated, and synchronized, while

⁹² US Army Combined Arms Support Command (CASCOM), “CASCOM-Support Starts Here,” accessed April 29, 2014, <http://www.cascom.army.mil/index.htm>.

⁹³ Ibid.

ensuring that it is affordable, relevant, and avoids unnecessary redundancy”⁹⁴ and at the same time a complementary force that is “agile and flexible, integrated, protected, trained and ready, precise and responsive and affordable.”⁹⁵ The paper proposes implications to sustainment forces. Specifically addressing Unified Action partner integration, the paper summarizes key points for the development of a future sustainment force. DoD must be able to establish relationships and develop a shared understanding of the industrial base, there must be depth in the industrial base and strategic partners, the force must be capable of conducting joint operations, and must be capable of supporting governmental and non-governmental organizations.⁹⁶

The paper uses an analytical framework to filter the defense priority missions through the sustainment warfighting function to propose a model solution for what sustainment must do to achieve these objectives. The globally responsive sustainment strategy outlines nine key tasks that Army sustainment must be capable of conducting aligned with six globally responsive sustainment attributes.

The attribute “integrated” assumes a force that is fully integrated and interoperable which as described includes private industry, strategic providers and joint organizations.⁹⁷ To provide a trained and ready force this network of partners must be trained, educated and exercised, understanding the breadth of strategic partners,

⁹⁴ US Army Combined Arms Support Command, *Army 2020 and Beyond Sustainment White Paper: Globally Responsive Sustainment*, 30 August 2013, 4.

⁹⁵ Ibid.

⁹⁶ Ibid., 23.

⁹⁷ Ibid., 25.

contractor support, and global supply chains.⁹⁸ The White Paper has clearly articulated the need of the Army Logistics Force to be integrated with sister services and the critical nature of professional education in achieving that vision.

Further, the Army established a Logistics Leadership Development Board, later renamed the Logistics Professional Education Board, managed by CASCOM, and was designed to propose a logistics professional education framework for officers. Little appears to have been published in reference to the findings or products of these boards, however; it too addresses the need for a strategy for logistics professional education.

Expert Analysis

In the period following the Gulf War the US military faced many of the same challenges; budget constraints, personnel drawdown, base closure and realignment, as well as assessing lessons learned from fighting a new type of war and integrating it into new strategy and doctrine. Similarly, the future of logistics demanded a smaller more efficient force. Focused by the CJCS's Joint Vision 2010 integration and synchronization were critical components to joint operations. In 1996, an article written by Lieutenant General John Cusick, J4, discusses the Joint Vision 2010s Four Emerging Operational Concepts: Dominant Maneuver, Precision Engagement, Full Dimensional Protection, and Focused Logistics. In his assessment he identified that focused logistics would require, "Logistics functions to transition from the rigid, vertical organization of the past into integrated, tailored combat service support packages."⁹⁹ Consistent with the developing

⁹⁸ Ibid., 26.

⁹⁹ LTG John J. Cusick, USA, and LTC Carol D. King, USAF, "A Joint Logistics Vision for the Future," *Logistics Spectrum* (November/December 1996): 7-9.

technology and information infrastructure of the military overall, he identifies emerging technology, GCSS, which would provide a shared data environment, noting that “information technology is a critical enabling function.”¹⁰⁰ In addition, the Six Critical Considerations of the Joint Vision 2010 address Joint Doctrine and Joint Education and Training as critical components to achieving “full spectrum dominance.”¹⁰¹ This review of Joint Logistics could easily have been written today as we still face several of the same dilemmas. While restructuring of units provided flexibility for component commanders, flexibility for combatant commanders still resides with the forces ability to integrate between stove piped services. As outlined by strategy and proponentcy, our force has still not obtained a system that allows for inter-service visibility of logistical capabilities.

The concept of integrated logistics remained a consistent thread throughout professional literature on logistics and sustainment as the US entered into conflicts in Afghanistan and Iraq. While there appears to be a level of significance placed upon PME in achieving integration objectives, very little has been written specifically about how or what JPME could potentially achieve.

In 2005, COL Christopher Paparone, the Deputy Director of Logistics and Engineering at the US Army Joint Forces Command, published an article in *Army Logistician*, reflecting upon the increasing need for logistics interdependence and how service cultures and sovereignty could potentially pose roadblocks to streamlining interdependence. These cultural differences between the services are a direct result of Title 10 USC, which identifies that each service shall be essentially self-sustaining. The

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

lack of formal JPME and exposure between branches only further distances inter-service understanding and trust relationships. As he addresses the need for inter-service coordination he noted that force development should strive “to design more modular and capabilities-based organization in anticipation of ad hoc interdependence.”¹⁰² Even as the US Army transitioned to a modular force, the basic understanding and common logistics operating picture was lacking. Once again, the idea of JPME is addressed but appears to be more of an afterthought. “As the U.S. military moves increasingly toward purer joint operations, it must find new ways to educate and develop service and joint logisticians who can facilitate the nuanced intricacies of focused and mutually beneficial forms of interdependence.”¹⁰³ The emphasis on joint logistics education is made clear, however, following publication of this article there was no strategy for education or specific objectives defined for the logistics community.

The US Army does appear to have begun an assessment of what is required to develop leader for Sustainment 2020. In an article published in 2013 for Sustainment Magazine, MG Wych discusses the logistic learning areas for the Army Officer. Those areas are defined as: Distribution—Supply Chain Management (D—SCM), Life Cycle Systems Management (LCSM), Logistics Planning (LP), and Defense Industrial Base Management (DIBM). There are no specifically defined logistic learning areas for the joint logistician. He refers to working initiatives to incorporate these objectives into the development of a logistics professional education strategy by the Logistics Professional

¹⁰² COL Christopher R. Paparone, “Fostering Joint Logistic Interdependence,” *Army Logistician* (January/February 2005): 36-37.

¹⁰³ Ibid.

Education Board, however; research has not found that any results of the board have been made available. He notes the lack of logistics programs tailored to meet the current and emerging need. “we have discovered that the Army has many disparate logistics education programs (both military and civilian) that are not clearly tied to an overarching strategy, Training and Doctrine Command priorities, or the capabilities described in the Globally Responsive Sustainment Strategy.”¹⁰⁴ The article states that the four logistics learning areas suggested would be considered for coverage in the curriculum, and will be investigated further in chapter 4 of this study.

An article written by Lieutenant General C.V. Christianson, former J4, gets at the heart of the need to define and understand joint logistics. He discusses our most recent operations in the war on terror and describes the necessity of understanding how to sustain operations simultaneously across the spectrum of operations. In the article, he identifies three imperatives for joint logistic success in meeting the complex challenges of the current and future operating environments. “The value of joint logistics can be measured by how well three joint logistic imperatives are achieved.”¹⁰⁵ The first of these is defined as Unity of Effort, requiring integration of US, joint, multinational, interagency, and nongovernmental logistic capabilities.¹⁰⁶ He further defines the need for common understanding, processes, and priorities in order to achieve this synergy. The second is the need for domain-wide visibility of logistics capabilities. The third is rapid

¹⁰⁴ MG Larry D. Wyche, “Synchronizing Leader Development for Sustainment 2020,” *Army Sustainment Magazine* (2013): 4-5.

¹⁰⁵ Christianson, “Joint Logistics in the Future.”

¹⁰⁶ Ibid.

and precise response of the logistics force to meet the need of the joint force as a whole. He does note the challenges to logistics integration, but also calls for the development of programs and initiatives to meet the needs of the logistics force. The critical areas addressed by Christianson echo the specific requirements as defined by our national strategy as well as proponents within the field of logistics. The underlying thread is that joint logistics is what “enables freedom of action for the Joint Force Commander,”¹⁰⁷ which establishes the need for a foundational knowledge of logistical authorities.

Our national strategic direction continues to push for interoperability, interdependence, and an agile force that is flexible enough to be responsive to both current and emerging operations. As previously discussed, combatant commanders’ ability to maintain a flexible logistics structure is constrained within the framework of Title 10 USC and GNA. Understanding the legal basis and foundations to joint logistics is critical to the facilitation of a common understanding of logistical capabilities as is outlined by Colonel Robin Akin, in a strategy research project, published in January of 2005. In it, she identifies the nature of logistics support to Combatant Commanders as service centric due to Title 10, which subsequently reduces their effectiveness to meet the provisions of Title 10 and GNA in joint operations that require interdependence of the logistics infrastructure.¹⁰⁸ She further recommends a solution that involves the creation of a Unified Logistics Agency (ULA) and Joint Logistic Commands (JLC) to facilitate command and control, planning and training. The ultimate goal of these two entities

¹⁰⁷ Ibid.

¹⁰⁸ COL Robin B. Akin, “Joint Logistics Cannot Work Without Legislative Enforcement of Title 10, and the Goldwater-Nichols Act and Logistics Reorganization” (Strategy Research Project, US Army War College, Carlisle Barracks, 2005).

would be to allow for the most responsive and efficient employment of logistics capabilities to the COCOM. Even with the creation of such entities to resolve service centric challenges, the requisite knowledge base of an ad hoc organization would still need to be addressed through JPME if it were to meet its desired objectives. One must consider the question of whether or not today's professional military logistics officer understands the legality and foundations of interoperability.

Educational Opportunities

The OPMEP defines intermediate level education (ILE) institutions and learning areas. The scope of this study has been limited to assessing officer intermediate level education (ILE) opportunities available within the US Army's CGSC. In addition this study will assess joint logistics courses offered in both resident standalone and web-based forums. The purpose of this section is to outline the scope of the current educational offerings and will be used as a foundation for analysis conducted in chapter 4.

Intermediate Level PME

As defined in chapter 1, this study will assess the US Army Command and General Staff College's Command and General Staff Officer Course (CGSOC) as representative of sister service's Intermediate Level Education programs. The mission of the CGSC is to, "educates, trains and develops leaders for Unified Land Operations in a Joint, Interagency, Intergovernmental, and Multinational operational environment; and advances the art and science of the profession of arms in support of Army operational

requirements.”¹⁰⁹ CGSC hosts several schools, the largest being Command and General Staff School (CGSS), which is responsible for the education of US Army majors and is responsible for meeting the requirements of JPME 1.¹¹⁰

The Command and General Staff Officer Course (CGSOC) provides field grade officers with Professional Military Education (PME). The goal is to prepare career officers with a larger context of unified action—multi-service, interagency, and multinational operations. Achieving unified action in wartime requires building competence and confidence through peacetime training and education, training, as we will fight.¹¹¹

The course accomplishes this through three phases: Common Core Course, Advanced Operations Warfighting Course and the Advanced Application Program more commonly known as the electives phase.¹¹² As outlined by the CGSOC Handbook, the scope of each phase is described below:

Common Core: “To educate and train field grade officers to comprehend U.S. Army and Joint Force doctrine and apply Mission Command in planning, preparing, executing, and assessing Unified Land Operations within the framework of a comprehensive whole of government approach.”¹¹³

AOWC: “The Advanced Operations Course educates and trains field grade leaders to serve as staff officers and commanders with the ability to build teams, lead organizations and integrate unified land operations with Joint, Interagency,

¹⁰⁹ United States Army Combined Arms Center (CAC), “Command and General Staff College (CGSC),” last reviewed October 17, 2014, accessed November 5, 2014, <http://usacac.army.mil/organizations/lde/cgsc/mission>.

¹¹⁰ United States Army Combined Arms Center (CAC), “Mission, Vision, Principles, Priorities and Philosophy,” last reviewed October 17, 2014, accessed November 5, 2014, <http://usacac.army.mil/organizations/lde/cgsc/cgss>.

¹¹¹ Command and General Staff College (CGSC), Circular 350-5, *Student Handbook* (Fort Leavenworth, KS: 2013), 3.

¹¹² Ibid.

¹¹³ Ibid., 5.

Intergovernmental, and Multinational partners in complex and uncertain environments.”¹¹⁴

Electives: “The Elective Program provides students the opportunity to enhance both personal and professional growth while conducting advanced studies which may be related to the Core and/or AOC curriculum. The program is designed to support long-term professional development of the student. The program is also designed to broaden the student’s professional needs.”¹¹⁵

The CGSC’s Department of Logistics and Resource Operations has scoped the logistic electives on a skill map that spans the tactical to strategic. Of the courses listed in figure 6, only a few are tailored to joint logistics. The scope of these classes will be assessed by the associated TLOs and ELOs that are covered by the curriculum lesson plans to provide a foundation for analysis in chapter 4.

¹¹⁴ Ibid., 9.

¹¹⁵ Command and General Staff College (CGSC), Circular 350-5, *Student Handbook*, 13.

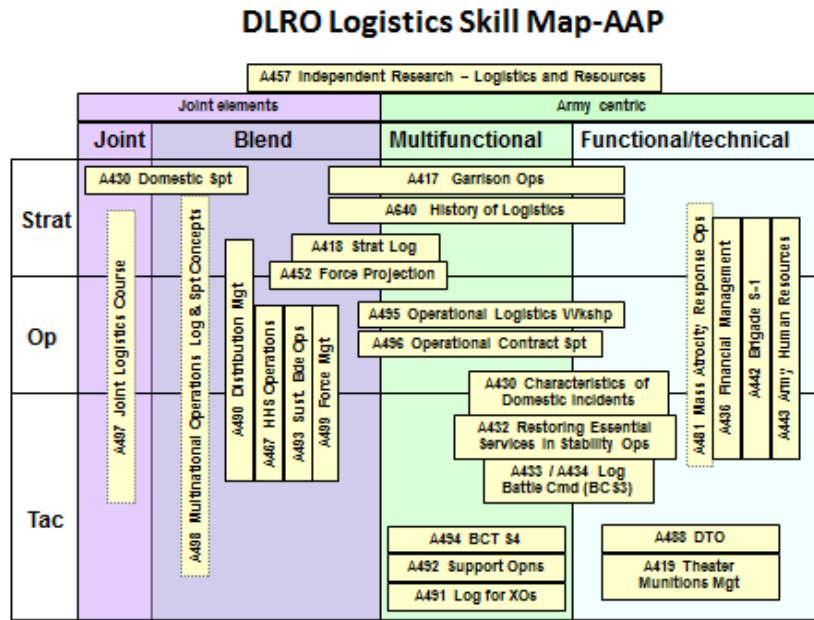


Figure 6. DLRO Logistics Skill Map–Advanced Application Program

Source: Allan S. Boyce, Assistant Professor/Chief, Curriculum Development, Department of Logistics and Resource Management, Command and General Staff College, DLRO Elective Brochure AY 15, received by author via email, November 13, 2014.

Resident Logistics Courses

Research of joint logistics courses within programs of the accredited DoD academic institutions has yielded four resident standalone courses that provide partial or full coverage of joint logistics. Those four courses are the Joint Logistics Course, the US Army's Theater Logistics Course, the Joint Action Officer Course and the Operational Contract Support Course.

The Joint Logistics Course (JLC) is a two-week resident course, designed to provide education that would allow students to achieve the application level of learning

in joint logistic functions. This course is designed to meet three TLOs at the application cognitive level.

The JLC focuses on theater-level joint logistics operations by preparing military and civilians to function in assignments that involve joint logistics planning, interservice and multinational logistics support and joint logistics in a theater of operations. To accomplish this, the JLC integrates component functional skills and knowledge through the study of strategy, doctrine, theory, programs, and processes. The JLC provides the opportunity for students to develop the attributes, perspectives, and insights necessary to manage logistics at the operational level of war.¹¹⁶

The Army Logistics University provides a resident, 18 week, Theater Logistics Planners Program (TLog). The course is designed to meet fourteen separate TLOs at the evaluation cognitive level.

The Theater Logistics Planners Program (TLog) is the Army's premier course for selected senior Company and Field Grade Officers, civilian logisticians and international participants who will be positioned within the Army as multifunctional, joint, and multinational logistics problem solvers. This course targets logisticians at the operational level while ensuring an understanding of strategic logistics.¹¹⁷

The Army Logistics University provides a two-week resident class (10 academic days), Operational Contract Support, designed to meet the requirements of the CJCS SAE 5.

This course prepares military and civilians to function in assignments that involve the management, forecasting and administration of contract support in a contingency environment. Students learn the latest OCS doctrine; how to integrate contract support requirements into the military decision making process; how to build acquisition ready requirements (known as JARB/ARB/JFARB packets) to include performance work statement development and independent government

¹¹⁶ Army Logistics University, "Joint Logistics Course (JLC)," accessed November 2, 2014, http://www.alu.army.mil/ALU_COURSES/ALMCJC-MAIN.htm.

¹¹⁷ Penny F. Koerner, Director of Curriculum, Theater Logistics Planners Program, Army Logistics University, "TLOG Advanced Sheet, 2013," received by author via email November 14, 2014.

estimates; how to integrate contract requirements into the overall unit spend plan process; how to manage contracts and contract officer representatives; how to set up and build contract management files; how to build quality assurance surveillance plans; and how to avoid common pitfalls customarily associated with outsourcing requirements.¹¹⁸

The Joint Deployment Training Center provides several courses aligned with Joint Planning objectives. The course that was assessed at the intermediate level was the Joint Action Officer Course (JAOC), a five day resident course designed to:

JAOC provides joint personnel with extensive hands-on instruction; covering Command relationships, joint operational planning, adaptive planning, global force management, the roles and responsibilities of Action Officers/planners, and Joint Operation Planning and Execution System (JOPES) guidance.¹¹⁹

Resident standalone course offerings were minimal as assessed through research in this study. There did not appear to be a database for Army or Joint Logistics educational offerings, hence, this list may not be all inclusive. These courses will be assessed on their scope and associated TLOs and ELOs (where available) for analysis in chapter 4.

Web-Based Joint Education

In addition to structured and institutionalized professional military education, the joint community offers web-based training through the Joint Knowledge Online (JKO) site. The following list was compiled through a search of logistics courses offered through JKO Courseware:

¹¹⁸ Army Logistics University, “Operational Contract Support (OCS),” accessed November 2, 2014, http://www.alu.army.mil/ALU_COURSES/9E-SI3C-ASI3C-950-ASI3C-MAIN.htm

¹¹⁹ Joint Deployment Training Center, “Joint Action Officer Course (JAOC),” accessed November 2, 2014, <http://www.jdtc.eustis.army.mil/CourseDetails.aspx?ID=105134>.

Joint Logistics (launched SEP 14)-DOCNET (Doctrine Network Education and Training).

Joint Logistics Enterprise (JLEnt)-(1 hr).

Introduction to NATO School Logistics and Movement Operational Planning Course.

Adaptive Battle Staff: Joint Sustainment Center.

Joint Sustainment (1 hr).

Joint Force Sustainment-(2 hrs).

Joint Deployment and Distribution Performance Metrics Framework for Sustainment Distribution (JDDE PMFSD) Course.

Joint Task Force-Port Opening, Seaport of Debarkation (JTF-PO SPOD) Course.

Joint Deployment Distribution Operations Center (JDDOC) Course.

Joint Task Force Port Opening-Aerial Port of Debarkation.

Joint Petroleum Training Course.

Joint Deployment Redeployment Process Presentation Course.

Joint Operation Planning and Execution System (JOPES)-Global Force Management (GFM) Executive Presentation-(2 hrs).¹²⁰

These courses are designed to facilitate a broad overview of the subject matter and initial familiarization. There are no pre-requisites required. These courses will be assessed on their scope and associated TLOs and ELOs (where available) for analysis in chapter 4.

¹²⁰ Joint Knowledge Online (JKO), Course Catalog, accessed November 2, 2014, https://jkodirect.jten.mil/Atlas2/faces/page/desktop/DesktopHome.seam?cid=tab_2&tabId=2. List compiled by author from JKO course search.

Conclusion

Overall, the review of literature confirms that the need to understand the JLEnt is critical to responsive sustainment of the joint force. The military's ability to leverage the JLEnt will be dependent upon a common understanding of capabilities. Legal considerations have produced a degree of complexity to joint interdependence and a comprehensive study of the foundations and basis for common user logistics within the enterprise is significant to understanding how forces may be integrated and employed to sustain a joint force. Lastly, there appears to be no common source document for JLPME, although each respective service maintains a professional education program for logisticians in accordance with the OPMEP.

The following chapter will explain the methodology that will be followed to answer the key research questions and develop knowledge in this complex field.

CHAPTER 3

RESEARCH METHODOLOGY

This purpose of this study is to examine what JLPME currently exists and what, if any, shortfalls require development in order to meet the critical needs of the United States Military as a joint force in support of unified action. To do this, a case study approach will be used that will include qualitative as well as quantitative analysis.

To conduct this analysis the following method will be used:

1. Examine the process by which joint logistics professional military education is developed;
2. Determine what is directed and what is recommended (What is recommended will be broken into three subcategories of strategy, proponentcy, and expert analysis to identify trends that will be grouped into logistic learning areas);
3. Assess the scope and learning objectives of courses currently represented within the DoD program of instruction;
4. Based on the findings from steps 2 and 3, conduct a comparative analysis to identify what shortfalls or gaps currently exist in logistics JPME.

The study will then compare and contrast results of the analysis to determine:

1. If directed requirements are sufficiently covered by the available program of instruction;
2. If what is assessed as recommended is sufficiently covered by the program of instruction;
3. If the current process by which joint education is developed is meeting the directed and recommended needs of the joint logistics community.

Finally, this study will assess if the JLPME program that currently exists is sufficient to meet the educational needs of JF2020 Logisticians to provide globally integrated and responsive logistics to the force in both the current and future operational environments.

CHAPTER 4

ANALYSIS

In order to conduct a comparative analysis, an assessment of the critical skills required for joint logisticians to support the JF2020 was developed through an analysis of the literature reviewed in chapter 2. The analysis was categorized into three parts. The first part was an analysis of the process by which JPME is developed to determine if any gaps exist in the development and inclusion of joint logistics into the current program of instruction for intermediate level officer education. The second was a comparative analysis of directed joint officer educational requirements against the current program of instruction. The third was a comparative analysis of the recommended joint logistics officer educational requirements against the current program of instruction.

The recommended portion of the analysis was divided into three subcategories: strategic trends, proponent trends, and trends in expert analysis. Within each subcategory, the literature was reviewed for areas of emphasis, critical skills, knowledge, and attributes required for the joint logistician. Those areas were then assessed by how frequently they appeared in the literature set reviewed in chapter 2. Based upon the number of times those areas were identified, they were rank ordered. This rank ordered list was then passed through two filters. Any area already addressed in JPME-1 was removed from further analysis as this area has already been assessed for sufficiency under the directed requirements. Any area that due to conflicting terminology was considered undefined was removed, but will be discussed in miscellaneous findings.

To determine if a learning area—objective was sufficiently covered, the area was provided a grade. The grade assessment is based on the author's subjective analysis of a

composite of criteria to include: how well the area was covered by the course, the number of lesson plans where the area was covered, the number of TLOs—ELOs where the area appeared, the cognitive level met by the TLO—ELO Course, and the number of hours dedicated to that particular area within a course.

Rating	Narrative	# of Lessons covering material	Cognitive Level	# of TLO/ELOs covering material	Coverage	Hours
A	Well covered in curriculum	26-50	APP - ANALY	3	Full Coverage	40
B	Has good coverage, but needs more	11-25	COMP	2	Partial Coverage	24
C	Has some but needs a lot more	0-10	KNOW	1	Minimal Coverage	1
F	Uncovered	0	-	0	None	0

Figure 7. JPME Development

Source: Created by author.

The levels of learning addressed in chapter 2 will be utilized as methods of assessment in the comparative analysis of requirements and offerings. The grade determination will serve as a measure of effectiveness to provide a foundation for the gap analysis and for further conclusions and recommendations in chapter 5.

Joint Logistics PME Development

The process by which JLPME is developed is nested within that of the general joint officer. JPME is provided for by Title 10 and the GNA. Development of JPME begins with the CJCS publication of the OPMEP which provides the only directed joint educational requirements. The MECC assists in the development of these requirements

and provides input from the services as well as proponents in its recommendations to the CJCS. The OPMEP is designed to meet the long-term educational requirements of the joint officer. In order to meet shorter-term operational needs, the CJCS has the authority to publish the SAE, which afford the chairman the ability to place emphasis on specific areas that are critical to current operations, but not necessarily a long-term educational requirement. The MECC may also assist in the development of the recommended SAE. Input from the MECC to the CJCS allows for a cyclic process with continuous assessment. The MECC and MECCWG utilize expertise from the services as well as operational experience in the development of their recommendations. The J4 as well as service proponents provide input on required logistics skills, however; the scope of JPME-1 is designed for what the general, cross-service, multi-branch officer needs to know and is not tailored to requirements for each warfighting function.

As per Title 10 and the OPMEP, each service is responsible for the development of its service PME and the incorporation of JPME within its educational programs. Between the joint and service level there is a less formal more flexible flow represented in figure 8 below by the cloud.

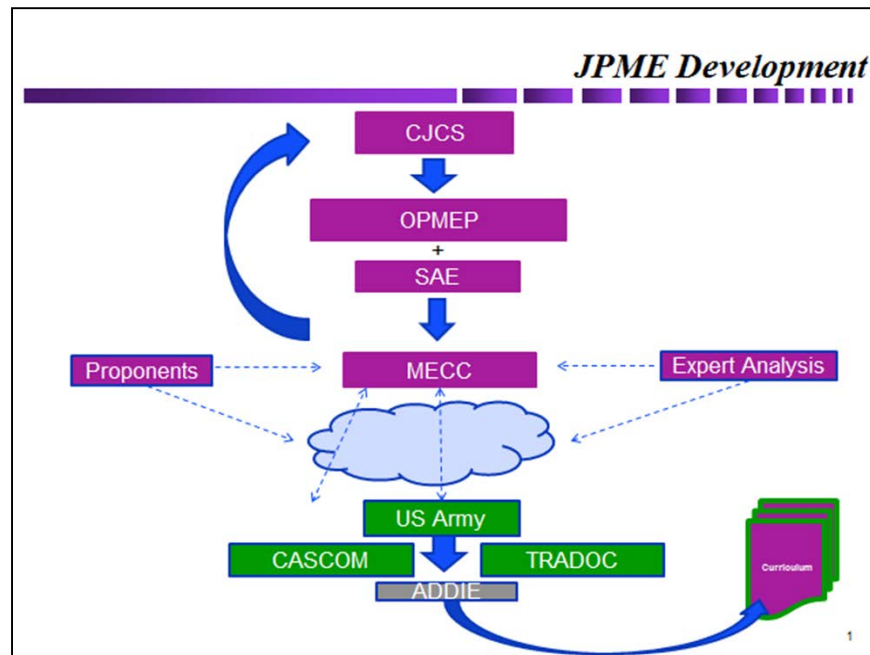


Figure 8. JPME Development

Source: Created by author.

This lack of formal structure allows services sovereignty in their professional education development and inclusion of JPME. At the service level, US Army TRADOC provides guidance for The Army School System (TASS) as well as for curriculum development. TRADOC PAM 350-70-7, the Army Educational Process outlines the ADDIE process which is used in the development of curriculum. The Army's proponent for joint logistic education is the US Army CASCOM's, Army Logistics University (ALU). With input from ALU, Joint Logistics requirements are analyzed and developed in conjunction with JPME through the ADDIE process.

The process by which JPME is developed appears to allow for sufficient input from the services as well as proponents. JPME is designed for the cross service, multi-branch or "general" officer and is not designed or structured to provide for joint

education by warfighting function. Joint logistics educational requirements developed within JPME-1 are designed for the general officer and not the joint logistician.

Directed

The OPMEP is the sole source document that provides for directed officer JPME learning areas and subordinate learning objectives. The six learning areas identified for intermediate level officer education (JPME-1) cover material that is tailored to the general officer. These learning areas are designed to be taught to the comprehension level, and in a few select areas application and analysis. Comparative analysis of the directed learning areas against current educational opportunities revealed that the six intermediate learning areas (ILAs) are moderately to well covered, by the CGSS curriculum. This coverage is sufficient to meet the general intermediate officer joint educational requirements but lacks depth into the joint war fighting functions. Joint Logistics is not directly covered by JPME-1 requirements, rather, it provides for an officers general understanding of the joint environment. As the scope of the learning areas and objectives do not cover joint logistics education specifically, no further analysis was conducted to look at general joint education electives, resident standalone courses or web based training.

The CJCS SAE, though not directed, are highly recommended for inclusion into the curriculum where possible. SAE 5, Operational Contract Support, is the only SAE that is within the scope of logistics. SAE 5 is recommended to be taught at the comprehension to application level. Comparative analysis has shown that SAE 5 is sufficiently covered by CGSOC and is additionally provided for through a standalone course offering. The CGSOC common core provides some coverage, but not sufficient as

it barely meets the comprehension level. The AOC phase has good coverage and meets the desired cognitive levels. Elective A496, Operational Contract Support, fully covers SAE 5 and provides students with analysis level of learning. For students not attending resident ILE—CGSOC the Operational Contract Support, two-week resident course fully covers the learning objectives.

SAE 5: OCS Requirement at Intermediate Level	<u>Subordinate Learning Objectives at Intermediate Level (SAE 5)</u>	COGNITIVE LEVEL Required (as assessed by author)	Level of	Level	Level	Level	Level
			Coverage in CC	Covered in AOC	Available through Electives	Available through Resident standalone	Available through Web-based
1		COMP	C	B	A	A	F
2		COMP	F	B	A	A	F
3		COMP	C	B	A	A	F
4		COMP	F	B	A	A	F
5		COMP	F	B	A	A	F
6		APPLICAT	C	B	A	A	F
7		APPLICAT	C	B	A	A	F

Figure 9. SAE 5–Comparative Analysis

Source: Created by author.

Analysis of the directed joint professional education requirements shows that what is directed by the CJCS is fully integrated into the ILE courseware.

Recommended

Strategic Trends

An analysis of trends in the strategic documents determined the areas of joint logistics most critical to the joint force 2020 as assessed through senior leadership at the strategic level. Strategic trends reveal that in addition to those areas covered by the OPMEP, there are certain skills required of the joint logistics community in order to meet

the needs of the JF2020. It was found that unclear terminology utilized in some of the strategic documents made assessment of a measurable educational outcome difficult. The terms interdependent and interoperable, often used interchangeably, and as defined by JP 1-02, provide little understanding of what specifically must be understood to achieve the conditions of an interdependent and interoperable force. The terms joint logistics and joint sustainment were used separately in the literature and were therefore assessed separately. The top eight logistics learning areas identified are listed in figure 8 below and analyzed for how well they are covered by current educational offerings.

STRATEGIC CONCEPTS - TREND ANALYSIS						
RANK	LOGISTICS LEARNING AREA	Level of Coverage in CC	Level Covered in AOC	Level Available through Electives	Level available through Resident	Level available through Web-based
1	Understand the OE	A	A	B	B	C
2	Joint Logistics	C	C	A	A	C
3	Joint Sustainment	C	C	A	A	C
4	Provide Sustainment in Anti-access/Area-denial	F	C	C	C	C
5	Understand the JLEnt	F	F	C	F	C
6	Deployment	C	A	A	A	C
7	Port Opening/Terminal Operations	F	C	C	A	C
8	Logistics Technologies (LCOP)	C	C	F	B	C

Figure 10. Strategic Trends—Comparative Analysis

Source: Created by author.

Through comparative analysis (see Appendix A), it was found that CGSOC provides minimal coverage of the critical logistic learning areas identified to support the

JF2020 in the Common Core and AOC phases. The coverage provided is good for the general officer, but does not pass comprehension level of learning and is not focused or detailed to joint logistics. Understanding the OE is well covered, however; the subordinate JLE is not specifically covered.¹²¹ There is no coverage of the JLEnt. The majority of coverage available is within the electives phase, which fills gaps for most learning areas, but provides little on sustainment in Anti-Access—Area Denial, port opening—terminal operations, and the JLEnt. Resident standalone courses provide good coverage in all areas except the JLEnt and provide minimal coverage on sustainment in Anti-Access—Area Denial and logistic technologies. Web based courses provide minimal coverage, but will not achieve past comprehension levels of learning.

Through assessment of the strategic trends comparative analysis this study determined that CGSOC provides comprehension level understanding designed for the general officer. Electives and resident standalone courses provide good to sufficient coverage of the critical areas, but are at the discretion of the officer and are not programmed for the joint logistics officer. Web based courses partially cover the material and provide a comprehension level of learning. The JLEnt and Sustainment in Anti-Access—Area Denial are the two areas that do not have sufficient coverage. The best opportunity to gain the educational skill set as assessed through strategic concepts is through officer selected electives and resident standalone courses.

¹²¹ As defined by JP 1-02 the JLE while a part of the OE, requires a different perspective/focus in assessment.

Proponent Trends

An analysis of the trends in proponent literature was conducted to determine the areas of joint logistics most critical to supporting the JF2020 as assessed through the proponents. Trends in the proponent literature reveal that concepts are nested with the strategic level but that proponents placed a greater emphasis on depth of understanding of capabilities and technology to facilitate interdependence, integration and interoperability. The proponents highlight a significant need for a common logistics language or “lexicon” between services, though the terminology of interdependent and interoperable remained unclear and removed as undefined. The top seven logistics learning areas identified are listed in figure 9 below and analyzed for how well they are covered by current educational offerings.

PROPOSERS - TREND ANALYSIS						
RANK	LOGISTICS LEARNING AREA	Level of Coverage in CC	Level Covered in AOC	Level Available through Electives	Level available through Resident	Level available through Web-based
1	Common Logistics Lexicon	F	F	F	F	F
2	Joint Logistics Technology (LCOP)	C	C	F	F	C
3	Understand and integrate the JLEnt	F	F	C	B	C
4	Deliver, Position, and Sustain Joint Forces (Dep/RSOI/JLOG)	C	C	B	A	C
5	Understand joint logistic common core processes, capabilities, and systems	C	F	A	B	C
6	Understand the OE	A	A	C	B	F
7	Provide Joint Sustainment/Logistics	C	C	A	A	C

Figure 11. Proponent Trends–Comparative Analysis

Source: Created by author.

Through comparative analysis (see Appendix C) it was found that CGSS provides poor to no coverage of the proponent recommended logistics skill set. The common core provides a very thin introduction of joint logistic capabilities but only provides comprehension level learning in a portion of the areas. There is no coverage of the JLEnt or of the joint logistics lexicon. There is sufficient coverage of understanding the OE, but not specifically tailored to the JLE. Electives provide a greater level of coverage, but do not address the joint logistics lexicon, joint logistic technologies, and partially cover introduction to the JLEnt. Resident standalone courses provide the best coverage of logistic learning areas but provide minimal coverage of joint logistic technology and no coverage of the joint logistics lexicon. Web based courses provide comprehension level learning for all areas with the exception of the joint logistics lexicon.

Overall assessment of the proponent trends comparative analysis determined that CGSOC provides poor to no coverage of proponent recommended areas. Electives and resident standalone courses provide good to sufficient coverage of the critical areas, but are at the discretion of the officer and are not programmed for the joint logistics officer. Web based courses partially cover the material and provide a comprehension level of learning. The JLEnt, the joint logistics lexicon, and joint logistics technologies are the areas that do not have sufficient coverage and are the top three ranked critical areas. The best opportunity to gain the educational skill set as assessed through analysis of proponents is through officer selected electives and resident standalone courses.

Expert Analysis

An analysis of trends in recent literature was conducted to determine the areas of joint logistics most critical to supporting the JF2020 as assessed through experts within

the field of logistics. The expert analysis is based in the respective authors' most recent operational experiences and is closely tied to challenges in the current system of joint logistics. Trends in the literature reveal a wide discussion of the need for domain-wide visibility¹²² and a logistics common operating picture to facilitate integration and eliminate redundancies between services. There is a significant discussion of the impacts of Title 10 and understanding the complexity of logistical authorities. The top seven logistics learning areas identified are listed in figure 10 below and analyzed for how well they are covered by current educational offerings.

EXPERTS - TREND ANALYSIS						
RANK	LOGISTICS LEARNING AREA	Level of Coverage in CC	Level Covered in AOC	Level Available through Electives	Level available through Resident	Level available through Web-based
1	Joint Logistics Planning	C	C	A	A	C
2	Foundations of Interoperability (GNA/Title 10/Logistical Authorities)	C	F	B	A	C
3	Joint Logistics Technology (LCOP/Tech)	C	C	F	C	F
4	Joint Logistics	C	C	A	A	C
5	Understand and Leverage the JLEnt	F	F	C	A	C
6	JL C2	F	F	F	A	C
7	Sustainment of Distributed and Simultaneous Operations	F	F	F	F	F

Figure 12. Expert Analysis Trends—Comparative Analysis

Source: Created by author.

¹²² Terminology of domain-wide visibility is unclear and at times referred to as JLEnt visibility or theater-wide visibility.

Comparative analysis (see Appendix D) reveals that there is minimal to no coverage in the CGSOC Common Core and AOC phases. There is no coverage of the JLEnt, Logistics command and control or sustainment of simultaneous operations. Electives provide good coverage of most areas, but no coverage of joint logistic technology, sustainment of simultaneous operations and minimal coverage of the JLEnt. Resident standalone courses provide good coverage of all areas with the exception of sustaining simultaneous operations. Web-based courses provide coverage but only to the comprehension level and do not cover sustaining simultaneous operations. It was found that sustaining simultaneous operations has no coverage provided in the current program.

Overall assessment of the comparative analysis determined that CGSOC provides poor to no coverage of the critical logistic areas as assessed through analysis of experts within the field. Electives and resident standalone courses provide good to sufficient coverage of the critical areas, but are at the discretion of the officer and are not programmed for the joint logistics officer. Web based courses partially cover the material and provide a comprehension level of learning. Sustainment of simultaneous operations does not have coverage. The best opportunity to gain the educational skill set as assessed through expert analysis is through officer selected electives and resident standalone courses.

Gap Analysis

Comparative analysis of directed and recommended joint learning areas against the current program of intermediate level officer education has revealed that JPME-1 directed requirements and CJCS SAEs are sufficiently covered in the current program. It was found that joint logistic learning areas are not defined, programmed or standardized

into JPME-1. Assessment of the recommended logistic learning areas as assessed by strategic trends shows insufficient coverage of the JLEnt and Sustainment Operations in Anti-Acess—Area-Denial. Assessment of the recommended logistic learning areas as assessed by proponent trends shows insufficient coverage of the JLEnt and joint logistics technologies, and no coverage of the joint logistics lexicon. Assessment of the recommended logistic learning areas as assessed by expert analysis trends shows insufficient coverage of Sustainment of simultaneous operations.

An overall assessment of the joint logistics educational offerings has shown that Joint Logistic officer education has sufficient coverage of logistic learning areas (except those discussed above) in resident CGSOC electives and resident standalone courseware, revealing that coverage of recommended logistic learning areas is at the discretion of the joint logistics officer. There is no joint logistic officer education strategy that provides for what the joint logistician must have, should have, and could have. Ultimately, the joint logistics officer must make a “best guess” at what educational offerings will prepare them to execute joint logistics in support of the JF2020.

Miscellaneous Findings

Through analysis of the current program of education it appears that not all courses (Common Core, AOC, Electives, Standalone Resident, Web-based) provide the same structured educational outcomes. TLOs—ELOs, levels of learning, course description, etc., vary dependent upon the organization that is developing the curriculum. This poses challenges in the development of a clear and objective analysis of what each course is designed to do and whether the level of coverage provided is meeting the learning objective.

Through research in this study, it was found that no educational strategy, career map, or database for joint logistic professional military education or educational opportunities, currently exist. The joint logistician must seek out educational opportunities, as there is no streamlined process, or pre-programmed path to success. Joint logistics has clearly been established as a critical function in support of the JF2020, but the education of the joint logistics officer has been left to the careful and unstructured self-development of the individual officer.

Analysis of the literature has shown there is little to no usage of the common lexicon of terms. Although published in 2010, the Joint Logistics Lexicon, a “doctrinal like” publication is not in fact doctrine and has not been widely disseminated throughout the joint logistics community for inclusion and use. Terms like joint logistics and joint sustainment are used interchangeably throughout the literature. The JLE, part of the larger OE, is not synonymous with the OE and requires a different focus in assessment and planning. Terminology such as “interdependent,” “interoperable,” and “integrated” are not clearly defined by doctrine. Interdependent is not defined at all by doctrine. Interoperability, or “the ability to operate in synergy in the execution of assigned tasks,”¹²³ and integration or “the arrangement of military forces and their actions to create a force that operates by engaging as a whole”¹²⁴ when viewed through the functional area of logistics are vague at best and require a more specific or measurable definition. It is difficult to train and teach to undefined objectives. This need has clearly been voiced through the proponents call for measurable joint logistics metrics. Until those metrics are

¹²³ Joint Chiefs of Staff, JP 1-02.

¹²⁴ Ibid.

defined, the use of such terminology presents complexity in decoding guidance from higher and developing training and education that prepares officers to operate in those capacities in the planning and execution of joint logistics.

Through research and analysis, it was found that many joint logistics working groups, committees, and boards have been formed but definitive results or findings of these bodies have not been published or made available to the logistics community with any type of ease of access. This signals that while the need for issues within the joint logistics community to be addressed exists, there are challenges to these organizations providing any type of definitive results.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The development of JPME is tailored to the general, cross-service, multi-branch officer. The process is moderately structured but flexible enough to provide for service sovereignty in development of educational requirements. JPME development is less structured at the service level and JPME requirements compete for inclusion with service specific skills. Though not expressly addressed in this study, time available and funding also contribute to the availability of joint education, likely why warfighting function specific learning areas are not included in JPME. The MECC provides for the inclusion of input from the field, service schools, and proponents to meet operational needs, but is tailored for the general officer. There is no separate process for development of logistic JPME requirements; hence, JPME-1 is too broad to meet the educational needs of the joint logistics community.

National Strategy has expressed the requirement for the joint officer to be “strategically minded.” Proponents call for a greater understanding—technical depth of joint logistics capabilities. As directed by the OPMEP, joint officer development begins at the intermediate level and is designed to achieve the comprehension level of learning. Intermediate level development is critical to achieving national strategy as it takes time to grow the strategic mind. How then can the joint officer be strategically minded and prepared to integrate when they are only prepared with comprehension level learning? Further, there is insufficient coverage of the critical logistic learning areas as assessed through trends in strategy, proponentcy, and expert analysis. At the intermediate level the

current program of joint education is producing a joint logistician who has a comprehension level of knowledge in joint operations, and is not guaranteed to have any technical knowledge in joint logistics unless they have self-selected opportunities. In order to meet strategic guidance, the intermediate level of JPME must target the application—analysis level of learning. Additionally, it must provide functional joint education in order to develop the skills required to achieve the integrated mindset of the JF2020 officer.

The joint logistics community must define, disseminate, and use joint logistics terminology. The Joint Logistics Lexicon was developed for inclusion in the community to facilitate the common understanding. A common understanding is emphasized in strategy, proponentcy, and within expert analysis and needs to be integrated into training and education of the joint logistician.

Legal foundations—Logistical foundations for interoperability are not widely understood. The call for interoperability and joint interdependence is far more complex for the joint logistician who must navigate legal authorities, funding constraints, and cultural rivalries to provide combatant commanders the most optimal and effective theater wide logistics. The joint logistics officer must skillfully operate within the provisions of Title 10, GNA and in the absence of a joint logistics command. Therefore, he must have a foundational knowledge of laws and authorities in order to properly design and implement solutions in planning. Logistical foundations need to be incorporated into joint logistics education.

The current program of JLPME has several shortfalls. As assessed throughout the literature, a basic understanding of the JLEnt is critical to a joint logistician's ability to

integrate capabilities but is barely represented in the curriculum. Joint Logistics, Joint Sustainment, and Joint Logistics Planning are poorly covered by PME, but remain critical functions in supporting JF2020. The opportunities for education in these critical logistics learning areas lie in self-selected courses. Accessibility to self-selected education is limited and does not meet the needs of the force. CGSOC electives are only offered to resident students. Resident standalone course space is limited and requires funding which in light of budget constraints will not provide an opportunity for all. Web-based training provides basic level introductions to critical logistic learning areas, but does provide coverage that gets to a level higher than comprehension. As funding continues to decrease, so in turn do opportunities to educate the joint logistician to the level that is required to support the JF2020. A solution that provides accessible opportunities for joint logistics education must be developed.

In turn, the lack of a joint logistic educational strategy leaves the joint logistician to seek out or “best guess” selected educational opportunities. It cannot be assumed that the joint logistician understands what learning areas are critical to their educational development in preparing to meet the needs of the future force. The logistics community must provide an azimuth for joint logistics education.

Through assessment and analysis in this body of research it has been determined that current Joint Logistics Officer Professional Military Education program is not suitable to meet current and future operational needs. JPME development lacks inclusion of functional requirements, the current program of education is only meeting the basic needs of the general officer and those courses offering coverage of critical logistic

learning areas are restricted and limited to select students. In order to adapt the current program of education, this body of research will conclude with several recommendations.

Recommendations

The following recommendations are offered for consideration in order to develop the joint logistics community and prepare to meet the needs of the JF2020.

1. The joint logistics community should collectively develop logistics JPME-1 and logistics SAE. The J4 acting as the proponent, though not authorized to direct these requirements, could effectively emphasize the critical needs of the joint logistics community.

2. Critical logistical learning areas as assessed through this study should be included. Long-term professional requirements would include: Understand and Integrate the JLEnt, Joint Logistics, Joint Planning, Understand Joint Logistics Technology to create a logistics common operating picture, Understand Joint Logistics Foundations (Title 10 USC, GNA, logistical authorities), and should provide emphasis on Sustainment in Anti-Access—Area-Denial and Sustainment of simultaneous and distributed operations. In order to effectively grow the strategically minded officer, learning objectives should be targeted to the application—analysis level.

3. An educational and career strategy for the joint logistician must be developed. It is clear that both our national strategy and proponentry expect a joint logistics force that is capable of conducting integrated and interdependent operations. We, the joint logistics community, must develop a strategy for the education of the Joint Logistician in order to meet the need of the JF2020. Through this body of research, several additional areas for study were assessed:

1. Development of an educational strategy for the Joint Logistician.
2. Development of a career map for the Joint Logistician.
3. Development of a data base for educational opportunities for the Joint Logistician.
4. Assessment on the availability of educational opportunities for the Joint Logistician.
5. Results of MECC—Working Groups—Boards on Joint Logistics Education.
6. Development of a solution for easily accessible web-based training that targets a higher level of learning.

Expert analysis of recent operations have highlighted the need for highly coordinated and synchronized inter service logistics. Our national strategy and proponency require joint logisticians who are capable of thinking strategically and who can provide rapid and precise response in contingencies. The foundation to this interoperable logistical infrastructure has clearly been established as JPME, however the current program of education is not meeting the needs of the joint logistics force. The responsibility of developing a joint logistics education system that is suitable of meeting current and future operational needs lies within the joint logistics community. Joint Logisticians must continue to define and develop educational opportunities that are consistent with the needs of the force in order to be fully prepared to answer our nations call. This study should serve as a basis for the development and revision of JLPME at the intermediate level.

DIRECTED COMPARATIVE ANALYSIS

[illegible]

Source: Created by author.

APPENDIX B

STRATEGIC TRENDS COMPARATIVE ANALYSIS

RANK	LOGISTICS LEARNING AREA	CCJO	Vision for Joint OTH Dev	JOINTED WTPAPER	Joint Training Guidance	UTL	Army Capstone Concept	Army Operating Concept	Covered by JPME 1? (Y/P/N)
1	Understand the OE	x		x	x			x	4 N
2	Joint Logistics		x			x		x	3 N
3	Joint Sustainment		x			x		x	3 N
	Provide Sustainment in Anti-access/Area denial								
4					x		x	x	3 N
5	Understand the JLEnt Deployment	x			x				2 N
					x				
6							x		2 N
	Port Opening/Terminal Operations				x				
7							x		2 N
	Logistics Technologies (LCOP)								
8						x	x		2 N
U	Integrated	x	x	x				x	4 N
C	Critical Thinker		x		x				2 N
U	Interoperable	x			x				2 N
U	Understand all elements of national power			x	x				2 Y (3e)
	Strategically minded		x						1 Y
	Ethical				x				1
	Organizational Flexibility	x							1
	Distribution	x							1
	JLQTS					x			1
	RSDI						x		1
	Mobility	x							1
	Operational Energy	x							1
	QCS				x				1
	Rapid Air Refueling					x			1
	CUL						x		1
	Joint Planning			x					1
	Interoperability Foundations (Title 10/GNA)	x							1

# Lessons/TL Os where covered	Highest level in lesson if known	Level of Coverage in CC
22	SYNTHESIS	A
1	COMP	C
1	COMP	C
0	-	F
0	-	F
1	COMP	C
0	-	F
1	APP	C

Number lessons covered in ADC	Highest level in lesson if known	Level Covered in ADC
1	ANALYSIS	A
1	COMP	C
1	ANALYSIS	C
1		C
0		F
1	SYNTHESIS	A
1	ANALYSIS	C
1	APP	C

Electives Covering Topic	Coverage	Level Available through Electives
A498/A497		B
A497	F	A
A497	F	A
A452/A497	P	C
A418/A409	P	C
A452	F	A
A418/A452	P	C
0		F

Resident Course Coverage	Level available through Resident
JLC	B
JLC (2 Week)/TLOG	A
JLC (2 Week)/TLOG	A
TLOG/JLC	C
N/A	F
TLOG	A
TLOG	A
JOPES	B

Web Based Course Coverage	Level available through webbased
Joint Logistics	C
Joint Logistics	C
J30 P-US1158-JFC 200 Module10: Joint	B
J50 P-US352-Joint Operation Planning and Execution System (JOPES) - Global Force Management (GFM) Executive Presentation - (2 hrs)	C
J40 P-US1122-Joint Logistics Enterprise	C
J45 N-US270-Joint Deployment and Distribution Performance Metrics Framework for Sustainment Distribution (JDDE PMFSD) Course & J40 P-US606- Joint Deployment Redeployment Process Presentation Course	C
J40 P-US399-Joint Task Force- Port Opening, Seaport of Debarkation (JTF-PO SPDD) Course & J40 P-US143-Joint Task Force Port Opening- Aerial Port of Debarkation	C
Execution System (JOPES) - Global Force Management (GFM) Executive Presentation - (2 hrs)	C

Source: Created by author.

APPENDIX C

PROPONENT TRENDS COMPARATIVE ANALYSIS

RANK	LOGISTICS LEARNING AREA	J4 Annual Guidance	J4 LOG CONCEPT	Sustainment Operating Concept	Globally Responsive Sustainment	Covered by JPME 1? (Y/P/N)
1	Common Logistics Lexicon	x	x		x	3 N
	Joint Logistics Technology (LOOP)	x	x		x	
2	Understand and integrate the JLEnt		x		x	3 P (5C)
3	Deliver, Position, and Sustain Joint Forces (Dep/RSOI/JLOG)		x		x	2 N
4	Understand joint logistic common core processes, capabilities, and outcomes					2 P (3f)
5	Understand the OE		x	x		2 N
6	Provide Joint Sustainment/Logistics		x		x	2 N
7	OCS			x	x	2 Y (SAE)
	Understand all elements of national power			x	x	2 Y (3e)
U	Interoperable			x	x	2 N
U	Joint Logistics Readiness					
U	Metrics	x			x	2
U	Integrated		x		x	2
	Unity of Effort		x			1
	CUL				x	1
	Strategic Access (Anti-access/area-denial)				x	1
	Sustain multiple missions concurrently				x	1
	Mobilization				x	1
	Establish the theater				x	1
	Deployment				x	1
	Pre-po stocks				x	1
	Close the theater				x	1
	Redeployment				x	1
	Interdependent				x	1
	Understand Foundations	x				1

# Lessons/TLs where covered	Highest level in lesson if known	Level of Coverage in OC
0	-	F
1	APP	C
0	-	F
1	COMP	C
1	COMP	C
22	SYNTHESIS	A
1	COMP	C

Number lessons covered in AOC	Highest level in lesson if known	Level Covered in AOC
0	-	F
1	APP	C
0	-	F
1	ANALYSIS	C
0	-	F
1	ANALYSIS	A
1	ANALYSIS	C

Electives Covering Topic	Coverage	Level Available through Electives
0	-	F
0	-	F
A418/A409	P	C
A452		B
A497		A
A498		C
A497		A

Resident Course Coverage	Level available through Resident
	F
	F
TLOG	B
JOPEs/TLOG	A/B
TLOG/JLC	B
TLOG/JLC	B
JLC (2 Week)/TLOG	A

Web Based Course Coverage	Level available through webbased
J50 P-US352-Joint Operation Planning and Execution System (JOPEs) - Global Force Management (GFM) Executive Presentation - (2 hrs)	C
J40 P-US1122-Joint Logistics Enterprise	C
J40 P-US116-Joint Deployment Distribution Operations Center (JDDOC) Course AND J40 P-US606-Joint Deployment Redeployment Process Presentation Course	C
J40 P-US1144-JFC 100 Module 4: Joint Force Sustainment - (2 hrs) & Joint Logistics	C
J30 P-US1158-JFC 200 Module 10: Joint Sustainment AND J40 P-US1144-JFC 100 Module 4: Joint Force Sustainment	B

Source: Created by author.

APPENDIX D

EXPERT ANALYSIS TRENDS COMPARATIVE ANALYSIS

RANK	LOGISTICS LEARNING AREA	Christianson, J4 2006	Wyche, CDR CASCOM, 2013	Alken	Paparoni, DDOL JFCOM - 2005	Cusik, J4 - 1996	Olinger, CDR Def En Spt CNTR Middle East 2008	Joint Logistics Education, Training, and Exercise Study (JLETES) on 1 Nov 2010	
1	Joint Logistics Planning	x	x	x	x		x	x	5
2	Foundations of Interoperability			x	x	x	x		4
3	Joint Logistics Technology (LOOP/Tech)	x			x	x			3
4	Joint Logistics	x						x	2
5	JLEnt	x		x					2
6	JL C2			x			x		2
7	Sustainment of Distributed and Simultaneous Operations	x					x		2
U	Rapid and Precise Response	x				x			2
	Culture				x				1
	Joint Logistics Environment	x							1
	Unity of Effort	x							1
	Interdependence				x				1
	Management		x						1
	Life Cycle Systems Management		x						1
	Management								1
	Common Logistics Lexicon				x				1

# Lessons/TLOs where covered	Highest level in lesson if known	Level of Coverage in CC
1	COMP	C
1	COMP	C
1	APP	C
1	COMP	C
0	-	F
0	-	F
0	-	F

Number lessons covered in AOC	Highest level in lesson if known	Level Covered in AOC
1	COMP	C
0	-	F
1	APP	C
1	COMP	C
0	-	F
0	-	F
0	-	F

Electives Covering Topic	Coverage	Level Available through Electives
A497/A452/A418		A
A497		B
0		F
A497		A
A418/A409	P	C
0		F
0		F

Resident Course Coverage	Level available through Resident
JOPES/TLOG/JLC	A
JLC (2 Week)/TLOG	A
JOPES	C
JLC (2 Week)/TLOG	A
TLOG/JLC	A
JLC (2 Week)/TLOG	A
	F

Web Based Course Coverage	Level available through webbased
ARN J7-US046-Adaptive Battle Staff: Joint Sustainment Center	C
Joint Logistics Course	C
	F
Joint Logistics and J30 P-US1158-JFC 200 Module 10: Joint Sustainment AND J40 P-J40 P-US1122-Joint Logistics Enterprise	C
Joint Logistics	C
	F

Source: Created by author.

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